Company: Southern California Gas Company (U904G)

Proceeding: 2016 General Rate Case

Application: A.14-11-004 Exhibit: SCG-213

SOCALGAS

REBUTTAL TESTIMONY OF JEFFREY G. REED

(CUSTOMER SERVICE TECHNOLOGIES, POLICIES AND SOLUTIONS)

June 2015

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA



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(CUSTOMER SERVICE TECHNOLOGIES, POLICIES AND SOLUTIONS)

SUMMARY OF DIFFERENCES¹ I.

TOTAL O&M -	Constant 2013 (\$000)		
	Base Year 2013	Test Year 2016	Change
SoCalGas	13,066	20,857	7,791
ORA	13,066	13,793	727

SOCALGAS REBUTTAL TESTIMONY OF JEFFREY G. REED

II. INTRODUCTION

ORA A.

The Office of Ratepayer Advocates (ORA) issued its report on Customer Service Technologies, Policies and Solutions (CSTP&S) on April 24, 2015. The following is a summary of ORA's positions:

- Non-Shared Research, Development and Demonstration (RD&D) Expenses: ORA uses a five-year average (2009-2013) as the basis for its Test Year (TY) 2016 forecast for RD&D expenses and recommends a TY 2016 revenue requirement of \$10.385 million;³ \$2.330 million less than the SoCalGas zero-based forecast for TY 2016.
- Shared Expenses: ORA states that it used a five-year average as the basis for its TY 2016 forecasts with adjustments for TY 2016 activities. ORA's forecast for several work groups, however, departed from the five-year average. Although ORA recommends reductions and disallowances in some cases, no explanation was provided on the specific adjustments made to the five-year average forecasts in relation to TY 2016 activity levels. ORA's estimate for Shared expenses was \$3.408 million; \$4.734 million less than SoCalGas' TY 2016 forecast. Specifically:
 - ORA found SoCalGas' TY 2016 forecast of \$0.665 million for its Biofuels and Low-Carbon Energy Resources Market Development work group to be reasonable and does not oppose the requested funding levels.⁵

ORA is the only party that submitted testimony containing TY 2016 forecast expenses for Customer Service Technologies, Policies and Solutions. TURN submitted testimony recommending 2013 Customer Service Technologies, Policies and Solutions non-labor expenses totaling \$1,756 dollars for gear containing the utility name and logo be removed from rates. TURN did not propose any changes to the TY 2016 forecast for Customer Service Technologies, Policies and Solutions. Therefore no cost forecast is shown for TURN. See Exhibit (Ex.) TURN-Marcus, pages 44-48.

² Ex. ORA-13, Report on the Results of Operations for San Diego Gas & Electric Company and Southern California Gas Company, Test Year 2016 General Rate Case – Customer Services, page 96, beginning at line 9 through page 107.

³ Ex. ORA-13, page 97.

⁴ Ex. ORA-13, page 100.

⁵ Ex. ORA-13, page 101.

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- ORA found SoCalGas' TY 2016 forecast of \$1.201 million for its Business Strategy and Development work group to be reasonable and does not oppose the requested funding levels.⁶
- ORA recommended zero funding in TY 2016 for SoCalGas' Policy and Environmental Solutions (PE&S) work group, asserting that the entirety of the activities performed by the work group should be classified as lobbying expense for shareholder benefit and excluded from rates. ORA does not provide a TY 2016 forecast, but states that, should the California Public Utilities Commission (Commission) reject ORA's recommendation for zero funding, the Commission should adopt 2013 adjusted-recorded expenses of \$2.344 million "as an expense level for SCG TY activities" and recommends additional tracking of outreach activities.
- ORA recommended \$1.542 million for the Natural Gas Vehicle (NGV) Program using a five-year average forecasting methodology. ORA suggests that any incremental activity requirements be absorbed within the five-year average revenue requirement. 10
- ORA claimed for some work groups (Non-Shared RD&D and Shared NGV Program) that it had discovered through its analysis and data requests that the SoCalGas forecasts included costs for "one-time, non-recurring and unusual expenses." These items were not identified or described in ORA's testimony and there was no information provided on how these items impacted ORA's TY 2016 forecasts.
- ORA claimed for some work groups (Non-Shared RD&D and Shared P&ES and NGV Program) that SoCalGas' historical expenses included embedded costs that could be redirected to incremental expenses in TY 2016.¹² ORA does not explain how funding for non-incremental ongoing activities can be used to fund incremental activities.

B. TURN

TURN (The Utility Reform Network) filed its testimony on May 15, 2015. The only item regarding the CSTP&S testimony was a recommendation to exclude \$1,756 dollars in expenses for "Clothing and Other Promotional Gear" from 2013 recorded expenses. ¹⁴

⁶ Ex. ORA-13, page 101.

⁷ Ex. ORA-13, page 103.

⁸ Ex. ORA-13, page 104.

⁹ Ex. ORA-13, page 105.

¹⁰ Ex. ORA-13, page 107.

¹¹ Ex. ORA-13, page 99 and footnote 262, and page 105, and page 106 and footnote 277.

¹² Ex. ORA-13, page 98; page 104; and pages 105 through 106.

¹³ Ex. TURN-Marcus, Report on Various Results of Operations Issues in Southern California Gas Company's and San Diego Gas and Electric Company's 2016 Test Year General Rate Cases, May 15, 2015.

¹⁴ TURN-Marcus, Section V Base Year Accounting Adjustments, pages 44-48.

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III. REBUTTAL TO PARTIES' O&M PROPOSALS

A. Non-Shared Services O&M

NON-SHARED	O&M - Constant 2013	3 (\$000)	
	Base Year 2013	Test Year 2016	Change
SoCalGas	8,080	12,715	4,635
ORA	8,080	10,385	2,305

1. Research, Development and Demonstration Disputed Cost

SoCalGas forecasts a TY 2016 revenue requirement for Non-Shared RD&D O&M expenses of \$12.715 million. This is an increase of \$3.206 million over the authorized annual funding of \$9.509 million for the 2012 funding cycle. This increase is necessary to address expanding requirements for technology development to address air emissions, climate impacts and system reliability and integrity.

a. ORA

ORA's estimate for SoCalGas' Non-Shared RD&D O&M expenses is \$10.385 million (labor of \$1.304 million and non-labor of \$9.081 million). To arrive at its estimate, ORA utilized a five-year average (2009-2013) of SoCalGas' RD&D expenses. Although the RD&D program is authorized at the program level, ORA forecast funding levels by sub-area as a basis for its forecast. ORA's RD&D program forecasts is \$2.330 million lower than SoCalGas' TY 2016 forecast. ORA's testimony can be summarized as follows:

- <u>Forecasting Methodology</u>: ORA asserts that a five-year average forecasting methodology is appropriate for determining the revenue requirement for the SoCalGas RD&D program.¹⁶ ORA claims that the Commission adopted an averaging forecast methodology for SoCalGas' RD&D program in the 2012 GRC.¹⁷
- <u>Year-to-Year Spending Variation</u>: ORA offers its assessment of year-to-year variation in RD&D recorded expenses. ¹⁸
- Funds Available from One-time or Unusual Costs and Projects in Progress: ORA asserts that historical expenses for "one-time, non-recurring and unusual expenses" have not been excluded from historical costs. ¹⁹

¹⁵ SoCalGas also forecast by sub-area, although ORA forecasts are markedly lower than SoCalGas forecasts for several high-priority areas.

¹⁶ Ex. ORA-13, page 97.

¹⁷ Ex. ORA-13, page 99, footnote 263.

¹⁸ Ex. ORA-13, page 99.

¹⁹ Ex. ORA-13, page 99.

- <u>Carry-over From Prior Funding Cycles</u>: ORA asserts that, "SCG's forecast includes funding for projects that are continuous or ongoing in nature and have costs embedded in historical expenses."²⁰
- Need for the Proposed RD&D Projects: ORA states that it "discovered that not all of SCG's TY 2016 projects are required to meet regulatory mandates and to maintain system safety and reliability because projects proposed in its TY 2016 testimony could be eliminated or postponed."²¹
- <u>RD&D Balancing Account</u>: ORA recommends continuing the balancing account treatment of the SoCalGas RD&D program.²²

i. SoCalGas Response to ORA RD&D Recommendation

a. Forecasting Methodology

ORA's TY 2016 revenue requirement forecast for RD&D is based on a five-year average. A five-year average forecasting methodology, however, is not appropriate for RD&D.

In support of its methodology, ORA incorrectly states that the Commission adopted an averaging forecast methodology in the 2012 GRC. This is an incorrect interpretation of SoCalGas' direct testimony. ORA references Ex. SCG-13, p JGR-5 where it states, "D. 13-05-010 adopted an average funding level of \$9.511 million...". As discussed elsewhere, the RD&D program is authorized for a multi-year cycle. \$9.511 million was simply stating the authorization on an annualized basis. It was not in reference to any forecasting methodology. It was merely a statement of what funding the Commission authorized. The Commission did not comment or rule on the zero-based forecasting methodology used for the SoCalGas forecast in the TY 2012 GRC cycle in D. 13-05-010.

A zero-based methodology, developed from a forward looking assessment of RD&D needs, is a more appropriate basis for forecasting this work group than historical averaging. As discussed in my direct testimony, ²⁴ the SoCalGas RD&D program is funded through a one-way balancing account and is funded across each GRC cycle and trued up at the end of each GRC cycle. The program is managed on a multi-year basis against a spending plan that matches the authorized budget. For example, for the 2008 program cycle (the last complete cycle) the full-

²⁰ Ex. ORA-13, page 99.

²¹ Ex. ORA-13, page 99, footnote 261.

²² Ex. ORA-13, page 99.

²³ Ex. ORA-13, page 99, footnote 263.

²⁴ Ex. SCG-13-R, Direct Testimony of Jeffrey G. Reed page JGR-5.

cycle spend was within less than 1% of the authorized amount.²⁵ For this reason, a multi-year average will be very close to the authorized funding level, by design.

ORA provides no testimony disputing the facts or accuracy of the RD&D needs assessment and analysis presented in my direct testimony's "Technology Needs Assessment Summary", 26 upon which the SoCalGas TY 2016 forecast is based. In particular, ORA does not address the growing need for technology development to address air emissions reductions, climate mitigation, reliability and system integrity. The ORA TY 2016 forecasts for the Customer Applications, Transportation and Operations RD&D categories are 56%, 65% and 71% respectively of the SoCalGas forecasts and are offered without any discussion addressing the increased RD&D drivers in those areas provided in direct testimony and the supporting appendix noted above. These include the need to dramatically reduce nitrogen oxides (NOx) and greenhouse gas (GHG) emissions in both transportation and customer applications and the growing need for technology solutions to support system integrity, reliability and automation (smart energy grid). Therefore, the SoCalGas forecast of \$12.715 million should be adopted as proposed.

The need for increased funding is demonstrated by the increases in utility RD&D addressing the same drivers in relation to the electric system operations and utilization. In 2010, total authorized Public Interest Energy Research (PIER) funding for electric and natural gas RD&D was \$69 million and \$24 million, respectively (nominal 2010 dollars). However, in 2012, Commission Decision 12-05-037 established the Electric Program Investment Charge (EPIC) program annual budget at \$162 million, more than doubling funding levels for electric RD&D. SoCalGas is not requesting a similar increase here, but a reasonable increase to fund RD&D efforts to address air emissions, climate impacts and system reliability and integrity.

²⁵ The CPUC authorized \$40 million (nominal) in SoCalGas RD&D program funding for the four-year 2008 - 2011 GRC cycle (D.13-05-010, page 636). SoCalGas' 2008 - 2011 recorded program expenses to the RD&D one-way balancing account were \$39.8 million (nominal) which is a difference of 0.5%.

²⁶ The "Technology Needs Assessment Summary" is attached to this testimony as Appendix C. For discussion of Gas Operations RD&D needs, please refer to the Direct Testimony of Raymond Stanford

discussion of Gas Operations RD&D needs, please refer to the Direct Testimony of Raymond Stanford (SCG-07).

²⁷ CPUC Responsibilities for Renewable and Energy Efficiency Resource Commitments by Investor-Owned Utilities and Ratepayers Hearing on Public Goods Charge & the Renewable Resources Trust Fund Senate Energy, Utilities and Communications Committee, March 29, 2011. Available at: http://www.cpuc.ca.gov/NR/rdonlyres/E8F14974-C95E-4B65-81A0-

 $⁸⁵²D72E8A4FE/0/CPUC_Senate_PGCReauthorization Hearing_032911_RenewablesEE.ppt$

²⁸ Available at: http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/167664.pdf

b. Year-to-Year Spending Variation

ORA's devotes significant attention to discussion of year-to-year variations in spending. ORA emphasizes years with below average spending but makes no mention of years in which the spend was near proposed TY 2016 levels. For example, in 2010 and 2011 SoCalGas RD&D program expenses were \$12.664 million and \$12.645 million respectively, which is very close to the TY 2016 forecast of \$12.715 million. SoCalGas has explained the reasons for year-to-year variations. The key point is that such variations are not relevant to establishing the revenue requirement for TY 2016. The SoCalGas RD&D program is funded over three or four year GRC cycles via a one-way balancing account that is trued up at the end of each program cycle. The program spending is managed across the cycle and, therefore, year-to-year fluctuations are not relevant to the forecast. Year-to-year fluctuations occur for a variety of reasons through the course of the multi-year cycle. Projects are completed and new projects are started and completed based on contracting timelines, timing of solicitation by co-funding entities and normal variation in project size. More simply, yearly variations average out over the course of the program cycle

c. Funds Available from One-time or Unusual Costs and Projects in Progress

ORA states that SoCalGas "historical expenses (2009-2013) include costs incurred for one-time, non-recurring and unusual expenses (expenses incurred that are not necessary or required to operate the utility business)." ORA does not present evidence in support of this claim. Next, ORA states that, "Although there were several questionable and unidentifiable expenses that required additional information and analysis, due to time constraints, ORA did not have time to issue additional data requests for information that had already been requested from SoCalGas."

ORA made a data request asking for additional information on costs incurred by the RD&D group (attached as Appendix A, Attachment 1 to this testimony). SoCalGas provided a complete response including line-item detail on hundreds of expenditures incurred by the RD&D

 $^{^{29}}$ Ex. ORA-13, page 98- 99, and footnotes 260 - 262.

³⁰ See Ex. ORA-13, page 98, Table 13-45.

³¹ ORA Deficiency Data Request SoCalGas-ORA-DEF-004-TLG, Question B.1. Attached to this testimony as Appendix B.

³² Ex. ORA-13, page 99, and footnote 262; pages 105 through 106, and footnote 277.

³³ Ex. ORA-13, page 99, footnote 262.

work group and held two follow up telephone calls with ORA to answer questions about the data request response. The first was held on February 24, 2015 and the second discussion occurred on February 26, 2015, approximately 2 months prior to the filing of ORA's testimony. ORA did not issue additional data requests. Notwithstanding the fact that ORA's assertions regarding unusual historical costs are incorrect, ORA's claims would not impact the zero-based forecast for TY 2016 because it is based on a forward-looking RD&D program plan as opposed to a

historical average.

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d. Carry-over From Prior Funding Cycles

ORA asserts that projects that are ongoing from the prior funding cycle (e.g., projects started in 2014 or 2015 that continue in 2016) reduce the need for funding in the new cycle because they have already been partially funded.³⁴ The phenomenon of projects extending beyond a funding cycle does not impact the forecast because a roughly equal number of projects will be ongoing at the end of the cycle which balances the effect across the full cycle (funds needed for ongoing projects at the beginning of the cycle are offset by projects started at the end of the cycle that are not completed and therefore not fully funded during the cycle). The effect that ORA describes actually has the reverse effect of what they claim. Carryover projects would increase, not decrease funding requirements at the beginning of the cycle but, again, the SoCalGas forecast is based on the full cycle including beginning and end effects.

e. Need for the Proposed RD&D Projects

ORA stated that it "discovered that not all of SCG's TY 2016 projects are required to meet regulatory mandates and to maintain system safety and reliability because projects proposed in its TY 2016 testimony could be eliminated or postponed."³⁵ ORA is simply noting the obvious fact that, if the RD&D program is not funded, the planned projects cannot be undertaken. RD&D projects are not mandated, but RD&D programs are explicitly recognized in California Public Utilities Code Section 740.1, which allows for customer funding of RD&D activities that meet established standards. All planned projects are in the customer interest, meet the established standards, and should be funded.

Ex. ORA-13, page 98, footnote 258.
 Ex. ORA-13, page 99, footnote 261.

B. Shared Services O&M

million should be adopted.

SHARED O&M	- Constant 2013 (\$000))	
	Base Year 2013	Test Year 2016	Change
SoCalGas	4,986	8,142	3,156
ORA	4,986	3,408	(1,578)

In summary, ORA's proposed reductions to the requested RD&D program funding is not

adequately supported and should not be adopted. ORA's proposed forecast, based on historic

average spending, is inadequate to fund natural gas based RD&D projects needed to support

California's environmental policy goals and achieve greater natural gas reliability, lower costs,

and increased safety. SoCalGas' zero-based TY 2016 RD&D program forecast totaling \$12.715

f. Conclusion

SoCalGas forecasts \$8.142 million for its Customer Service Technologies, Policies and Solutions Shared Services O&M expense for TY 2016 in four work groups: Policy and Environmental Solutions (P&ES), Biofuels and Low-Carbon Energy Resources Market Development, Business Strategy and Development and the Natural Gas Vehicle (NGV) Program. There are disputed costs in the P&ES and NGV forecasts.

1. Policy & Environmental Solutions Disputed Costs

SoCalGas requests TY 2016 funding of \$4.005 million for P&ES O&M expenses (labor of \$1.940 million and non-labor of \$2.065 million). The P&ES group was formed in 2013, incorporating the existing Environmental Affairs (now Air Agency Liaison and Customer Support) group and adding resources in the areas of Energy & Environmental Policy and Legislative Analysis & Public Policy. The additional functions were necessary to address a significant increase in the volume of new and proposed policies and regulations by agencies regulating SoCalGas that impact SoCalGas operations, rates, and customers.

The core function of the newly formed groups is to provide analysis of the impacts of policies and regulations to inform planning and policy development by SoCalGas, its customers and other stakeholders such as state agencies and interested parties. The group engages on matters that directly impact SoCalGas' operations, customers, and SoCalGas' efforts to provide safe and reliable service, at reasonable rates.

The function of these groups is predominantly analytical and focuses on evaluating the impacts of existing or potential policies and regulations on air emissions, greenhouse gas emissions, system operations, and customers. The work products of these groups inform internal decision making, support education and outreach to agency staff, policy makers and other stakeholders to ensure that these groups have an accurate fact base with which to address matters related to natural gas and natural gas infrastructure, and they support SoCalGas participation in formal processes and proceedings impacting SoCalGas operations, rates, environmental footprint, or customers. The external engagement of the group is predominantly with customers and agencies that directly regulate SoCalGas. Engagement by EP&S staff with public officials who are not with agencies that directly regulate SoCalGas has been, and is expected to be, de

minimis.

a. ORA

ORA disputes SoCalGas TY 2016 revenue requirement forecast of \$4.005 million funding in TY 2016 for the P&ES work group, claiming that the entire amount should be excluded from rates as lobbying expense. ORA states that "The primary purpose of this work group is to engage in lobbying activities that benefit SoCalGas and its shareholders more than ratepayers. These costs should be recorded below the line and be funded 100% by SoCalGas shareholders." 36

ORA's assertion regarding lobbying appears to be based upon an incorrect understanding of the function and activities of the P&ES work group. SoCalGas lobbying activities are undertaken by the State Government Affairs group and those costs have been excluded from GRC cost forecasts.

ORA's assertion that the activities of the P&ES group are undertaken for the benefit of shareholders is also incorrect. The activities undertaken by the P&ES group are for the benefit of SoCalGas' customers and are appropriate to include in SoCalGas' authorized revenue requirement. ORA claims that the activities of the P&ES group are undertaken primarily for the benefit of shareholders. ORA does not, however, explain how P&ES activities benefit shareholders. ORA's claim is simply unsupported. The matters addressed by this group include greenhouse gas mitigation, air emissions regulation, operational requirements, and how these matters impact SoCalGas' operations and customers. These efforts assist in the provision of safe

³⁶ Ex. ORA-13, page 103.

independent of the purpose of the group. The P&ES work groups and activities are described in direct testimony and are summarized again below.³⁷

and reliable service at reasonable rates. Any collateral benefit to shareholders is speculative and

i. Air Agency Liaison and Customer Support

The Air Agency Liaison and Customer Support (formerly Environmental Affairs) group is responsible for education of and assistance to customers regarding compliance with current and proposed air emissions regulation and liaison with the air districts regarding these matters. The 2012 GRC decision specifically found that such costs (then incurred by Environmental Affairs) were appropriate for recovery through rates. There, the Commission recognizes that "Since the use of natural gas by both large and small customers is affected by these air quality standards and regulations, we believe it is important for SoCalGas to have a role in explaining to its customers how the use of these standards and regulations will affect their businesses, and the way in which they consume natural gas." It would certainly follow that explaining these impacts to other stakeholders, including agency staff and decision makers, is equally appropriate and important. Regardless, SoCalGas is permitted to incur reasonable expenditures related to appearances before regulatory and other governmental bodies in connection with SoCalGas' existing or proposed operations.

ii. Energy & Environmental Policy

The Energy & Environmental Policy group performs analysis of potential impacts of existing or proposed regulations or state policies on SoCalGas operations, rates, and customers in their use of natural gas; and to disseminate that information to internal and external stakeholders (education and outreach). In addition, the analysis provides factual basis to support appearances before regulatory or other governmental bodies in connection with SoCalGas' operations. The activities of this group relate to agencies that are direct regulators of SoCalGas: the California Energy Commission, the air districts, District 9 of the United States Environmental Protection Agency and the California Air Resources Board and the California Public Utilities Commission (in support of the regulatory affairs group). SoCalGas must engage with its regulators on matters relevant to its operations, its customers, and the use of natural gas. Such activities are appropriate for rate recovery provided they are reasonable. A recap of some of the primary

³⁷ Ex. SCG-13-R, Direct Testimony of Jeffrey G. Reed pages JGR-20 through JGR-28.

³⁸ Decision (D.)13-05-010, page 642.

 matters addressed by the Energy & Environmental Policy group is presented below. All of these matters relate directly to SoCalGas operations, rates and the use of natural gas by customers.

Air Quality Management Plan (AQMP) Development and Implementation — Local air districts must develop periodic AQMP identifying rules and strategies to meet the National Ambient Air Quality Standards (NAAQS) established by the Federal Environmental Protection Agency (EPA). Two of the local air districts served by SoCalGas the South Coast Air Quality District (SCAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD), are currently not in attainment for particulate matter (PM) and ozone. By 2016, both districts must submit plans to meet current ozone standards. The districts have already begun the public process to evaluate potential rules and strategies to meet the standard. P&ES staff works with the district to develop cost effective means to meet NAAQS. Activity levels will continue to increase as the districts get closer to their 2016 deadlines and the subsequent implementation period.

Natural Gas Act (AB1257) Implementation—Beginning in November 2015, and every four years thereafter, the California Energy Commission (CEC) will identify strategies to maximize the benefits obtained from natural gas as an energy source, helping the state realize environmental and cost benefits afforded by natural gas. The CEC's ongoing and continuous effort requires SoCalGas (through the P&ES group) to support and participate in CEC's working group and submit testimony to form the basis of periodic policy reports.

Greenhouse Gas Reductions—Assembly Bill (AB) 32 requires California to reduce its GHG emissions to 1990 levels by 2020 and executive order S-3-05 requires a reduction to 80 percent below 1990 levels by 2050. In the First Update to the AB32 Scoping Plan approved in May 2014, California Air Resources Board (CARB) lays out an ambitious agenda to put regulations in place to meet the 2050 goal. Implementing this plan and future updates will require significant effort by SoCalGas' P&ES group in TY 2016 and beyond.

Zero Net Energy Building Policies—The CEC's 2013 Integrated Energy Policy Report (IEPR) established a definition for zero net energy (ZNE) buildings in anticipation of ZNE requirements for new construction starting in 2020. The treatment of natural gas technologies in these regulations will have significant impact on natural gas customers and SoCalGas operations to deliver natural gas to homes and buildings. The P&ES group will be asked to assess alternatives and proposals related to this set of new regulations.

Methane Emissions Reduction Policies — New policies and regulations on methane emissions from natural gas production, transmission and distribution are emerging at the federal, state and local levels in order to meet federal and state climate change policies, as well as address safety concerns related to natural gas operations. These regulations may impact natural gas supplies and will impact SoCalGas operating practices and costs. ³⁹ Significant effort is currently being expended by the P&ES group to review the numerous

³⁹ Ex. SCG-13-R, page 24 and page 25.

studies and mitigation proposals in this topic area and this is expected to increase in TY 2016.

iii. Legislative Analysis and Public Policy Group

The Legislative Analysis and Public Policy group engages in similar activities to the Energy and Environmental Policy group but it focuses on analysis of the impact of proposed legislation on SoCalGas operations, rates and customers in their utilization of natural gas. The group also deals with various other matters related to local issues such as the Dig Alert program or other matters that do not fall within the purview of the Energy and Environmental Policy group.

iv. Historical P&ES Costs

ORA also takes issue with information provided to ORA to explain where historical P&ES costs resided. In Ex. ORA-13, ORA states:

ORA attempted to review and analyze costs SCG incurred from 2009-2013 for efforts to educate policy makers and assist in the development of reasoned legislation ORA was trying to determine whether SCG employees were charging time accurately between ratepayers and shareholders with regard to lobbying activities. SCG did not provide the information and stated that "The hours and costs of various staff members previously supporting policy work on an occasional or *ad hoc* basis was not separately tracked and is therefore not available."

In making this statement, however, ORA appears to misunderstand SoCalGas' response to data request ORA-SCG-DR-043-TLG questions 12b and 12c. 41

In ORA's testimony, ORA cites SoCalGas response to questions 12b and 12c for support. 42 Questions 12b and 12c ask for historical cost detail on who was performing the activities currently performed by the Policy and Environmental Solutions Group prior to formation of the group in 2013. Specifically, Question 12b asks which work group performed and what costs were associated with "state and federal agency policy analysis, engagement, outreach and customer support related to existing and proposed state and federal policies, laws and regulations concerning natural gas utilization." 43 Question 12c asks the same question related to, "efforts to educate policymakers and assist in the development of reasoned legislation,"

⁴⁰ Ex. ORA-13, page 104.

⁴¹ Responses to data request ORA-SCG-DR-043-TLG questions 12b and 12c are attached to this testimony in Appendix A.

⁴² Ex. ORA-13, page 104, footnote 272.

⁴³ Appendix A, Attachment 2 (Data request ORA-SCG-DR-043-TLG questions 12b).

environmental policy and regulation (such as criteria pollution and greenhouse gas regulation), and energy policy and regulation (such as CEC's IEPR)."⁴⁴

SoCalGas responded by providing the work groups and associated FTEs performing the activities currently being performed by the P&ES group as well as the historical costs for the work groups that mapped to the P&ES group. ⁴⁵ SoCalGas provided cost and staffing levels at the work group level rather than according to the specific activities that ORA requested because costs are not recorded according to activity areas.

SoCalGas added to its response, for transparency and completeness of response, that "hours and costs of various staff members previously supporting work on policy matters on an occasional or ad hoc basis was not separately tracked and is, therefore, not available." This means that SoCalGas employees, in various departments, that are, for example, asked to provide subject matter input related to policy issues, do not track or charge time to P&ES; rather, their costs stay in their departments. These costs do not appear in P&ES historical costs nor are they part of the TY forecast. As such, ORA was provided the requested historical data and there is no basis for ORA's claim that ORA was unable to review and analyze the costs.

v. ORA's 2013 P&ES Funding Alternative

ORA suggests that, if the Commission rejects their zero funding request, a revenue requirement of \$2.344 million should be adopted based on SoCalGas' 2013 adjusted-recorded expenses. This is well below the P&ES 2014 recorded expense of \$2.990 million. ORA provides no support or rationale for its TY 2016 recommendation. SoCalGas has provided full detail on its forecast for this group, including a detailed staffing breakdown and back-up for the non-labor forecast. SoCalGas' engagement on matters that impact its operations, rates and customers is clearly in the customer's interest. The uptrend in activity in the P&ES work group is evident in the historical data and SoCalGas' funding request of \$4.005 million is reasonable, was fully supported in direct testimony and should be adopted.

⁴⁴ Appendix A, Attachment 2 (Data request ORA-SCG-DR-043-TLG questions 12b).

⁴⁵ Appendix A, Attachment 2 (Data request ORA-SCG-DR-043-TLG questions 12b).

⁴⁶ Appendix A, Attachment 2 (Data request ORA-SCG-DR-043-TLG questions 12b).

⁴⁷ Ex. ORA-13, page 104.

⁴⁸ Ex. SCG-13-R, page JGR-22, Table JGR-10; and Appendix A, Attachment 2 (response to ORA's data request ORA-SCG-DR-043-TLG, Question 12).

vi. ORA's Tracking Alternative

ORA's recommendation for additional tracking of activities is unnecessary, but, in the interest of full transparency, SoCalGas would not object to reporting in the next GRC time spent by the P&ES group performing education and outreach efforts with public officials who are not regulators of SoCalGas (this would generally be state or local elected officials or appointees). Such educational and outreach efforts are expected to be immaterial as a proportion of the total activity of the group.

2. Natural Gas Vehicle Program Disputed Cost

The SoCalGas NGV program has been authorized since the mid-1990s to advance state goals for expansion of the use of alternative fuel vehicles. In this GRC, SoCalGas proposes an expansion of program funding from base year funding of \$1.432 million to a TY 2016 forecast of \$2.272 million to continue ongoing program activities and to address new work requirements related to an expanding NGV customer base, increasing volume of new NGV installations and expanded activity on customer outreach, including activity in several new transportation areas (such as off-road applications). SoCalGas is requesting \$0.839 million in incremental funding over 2013 BY expense of \$1.432 million to support accelerating growth in the NGV customer segment. ORA and TURN both dispute some costs forecast for the NGV program.

a. ORA

ORA takes issue with the SoCalGas TY2016 NGV request. In opposing SoCalGas' NGV program O&M forecast, ORA states "...SoCalGas has not demonstrated that it requires incremental funding of 58.55% over 2013 recorded expenses to perform activities associated with its Natural Gas Vehicle Program. The Commission should adopt ORA's estimate of \$1.542 million for SoCalGas Natural Gas Vehicle Program as a reasonable expense level for the TY 2016..." ORA arrives at their forecast using a five-year average (2009-2013).

ORA did not dispute the program of work proposed for the NGV group but asserted that the work could be accomplished at historical funding levels through realization of undefined productivity gains and re-allocation of what it calls embedded costs. ⁵⁰ These claims are not

⁴⁹ Ex. ORA-13, page 105.

⁵⁰ Ex. ORA-13, page 106.

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supported by analysis of resource requirements and ignore the work driver analysis presented in direct testimony and in response to ORA's data request.⁵¹

Increases in new service requests and customer count in the historical period were absorbed by scaling back outreach activities, extending cycle time on some processes and on process redesign efforts which have since been completed. The SoCalGas forecast is based on analysis of the resources required to execute work volumes forecast for TY 2016 (volumes that ORA does not dispute). While not contesting activity levels forecast for TY 2016, ORA states that SoCalGas "has been able to manage significant market growth, customer interest and associated utility outreach activities at expense levels that have remained stable between 2009 and 2014 (with the exception of 2012)." This does not address the difference in work drivers and activity levels between the historical period and TY 2016. Current resources available for customer outreach are not adequate to meet the program goal of 10 million (MM) therms of annual new NGV load. The historical costs also do not reflect any expenses for addressing planned new activity in off-road applications (marine, rail, equipment) and commuter / home refueling applications described in direct testimony. 53

In addition, ORA states that "...SoCalGas TY 2016 forecast includes costs for activities that are on-going and have costs already embedded in its historical expenses for the same or similar activities..."⁵⁴ It is not activities, but activity levels (not the nature of the work but the volume of the work) that are relevant. ORA is correct that the SoCalGas TY2016 forecast includes funding to meet historical activity levels. It also includes funding for incremental activity levels in TY 2016 that go beyond activity levels in the historical period.

The state has ambitious goals for alternative fuel vehicles. With the low price of natural gas relative to other fuels, and advances in vehicle technology, the natural gas vehicle market in southern California is poised for growth and the SoCalGas NGV program can play a significant role in promoting attainment of this potential. The role of the Commission in promoting alternative fuel vehicles is codified in Public Utilities Code 740.3(a), which instructs the

⁵¹ Ex. JGR-13, page JGR-31 and Appendix A, Attachment 3 (SoCalGas' response to data request ORA-SCG-DR-043-TLG question 13).

⁵² Ex. ORA-13, page 107.

⁵³ Ex. SCG-13-R, page JGR-31.

⁵⁴ Ex. ORA-13, pages 105 - 106.

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Commission to evaluate and implement polices to "...promote the development of equipment and infrastructure needed to facilitate the use of...natural gas to fuel low-emission vehicles..."

SoCalGas' TY 2016 forecast of \$2.271 million for the NGV program is fully supported by its work-driver analysis and should be adopted.

b. TURN

TURN challenged \$1,756 in 2013 recorded-adjusted expense categorized as "Clothing and Other Promotional Gear", ⁵⁵ stating that these expenses are not necessary and should be excluded from the TY 2016 forecast. These expenditures were for items such as pens and flash drives containing the web address of the SoCalGas NGV site and were provided to current or prospective NGV users for the purpose of promoting the use of natural gas as a transportation fuel, which is the core purpose of the program. TURN's recommended reduction should be rejected.

IV. CONCLUSION

To summarize, the Customer Services Technology, Policy and Solutions work area comprises a number of functions that benefit customers by advancing technologies in support of Commission goals, supporting customer environmental compliance, ensuring that there is a proper fact base for establishing and implementing policies and regulations impacting SoCalGas and its customers and promoting adoption of clean natural gas solutions such as natural gas vehicles and biogas. SoCalGas TY 2016 forecasts are well supported and SoCalGas' forecasts of a TY 2016 revenue requirement of \$12.715 million for its non-shared RD&D and its TY 2016 forecast for shared-service activities of \$8.142 million should be adopted.

This concludes my prepared rebuttal testimony.

⁵⁵ Ex. TURN-Marcus, Section V Base Year Accounting Adjustments, pages 44-48.

APPENDIX

TO REBUTTAL TESTIMONY

OF JEFFREY G. REED

ON BEHALF OF SOCALGAS

CUSTOMER SERVICE TECHNOLOGIES, POLICIES AND SOLUTIONS

Appendix Attachments

- A. Responses to Data Request ORA-SCG-DR-043-TLG
 - 1. Questions 10 and 11
 - 2. Question 12
 - 3. Question 13
- B. Response to Data Request SoCalGas-ORA-DEF-004-TLG; Question B.1
- C. Technology Needs Assessment Summary
 (Appendix B of Ex. SCG-013-R; Direct Testimony of Jeffrey G. Reed;
 Customer Service Technologies, Policies and Solutions)

Appendix A-Attachment A.1 ORA-SCG-DR-043-TLG, Questions 10 and 11

ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

10. For SCG's Customer Service Technologies, Policies and Solutions for 2009-2013 provide, in a spreadsheet similar to the one shown in workpapers on page 65, a detailed and itemized listing of all labor and non-labor expenses (note: do not lump expenses together in the response, separate and identify the expenses by the categories as requested below) incurred for 1) lobbying activities ("efforts to educate policymakers and assist in the development of reasoned legislation, environmental policy and regulation..."; see pg. JGR-20), 2) employee meals, 3) employee luncheons, 4) vendor payments for offsite meetings and events (provide copies of contracts for costs and services provided), 5) all entertainment expenses, 6) employee recognition activities, 7) sporting events, 8) bonuses/awards, 9) employee/company memberships and dues, 10) all contributions, 11) charitable events, 12) brand awareness and loyalty surveys/campaigns/events, and 13) other employee reimbursable expenses.

SoCalGas Response:

The expenses shown in the attachment "ORA-SCG-DR-043-TLG-Q10" reflect the dollars spent in 2009-2013 as charged by the operating areas. The data shows that there is variation in categories used, which is dependent upon the people responsible for assigning costs. All recorded costs are included in the attachment. Not all categories requested by ORA are specifically or separately identifiable. For example, brand awareness and loyalty surveys/campaigns/events are not separately identified from other advertising or event expenses.

Please note that lobbying activities are not included in recorded or requested GRC dollars. Lobbying activities are out of the scope of the GRC and are not ratepayer funded.

Workpaper for ORA-SCG-DR-043-TLG, Question 10 Exhibit Reference: SCG-13 Customer Service Technologies, Policies & Solutions

	CODIT: DOIN PROOF TAMOR				A Modern John	0,000	1/1/0//10	010 700 110	000 000	701 200 010
	NON-SHABED Total					\$12,868,425	\$10,030,01\$ \$17,664,126	\$17,826,338	\$13,67,020	\$15,067,495
Worknaper	Worknaper Description	Cost Type	C/R Caten	Cost Flemen	Cost Flement Description	Total 2009	Total 2010	Total 2011	Total 2012	Total 2013
2RD001 001	R-PD&D CY TECHNOLOGY DEVELOPMENT		C/E Categ	6110020	SAL-MGMT S/T	\$901 597	\$1 000 235	\$1 019 241	\$1 152 421	\$858 500
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Overtime Labor T&1/2	6110030	SAL-MGMT T&1/2	08	657,770,14	80	125,221,14	\$5.413
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Straight Time Labor	6110080	SAL-CLERICAL/TECH ST	\$12.680	\$21.126	\$18.469	\$15.247	\$5.776
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Straight Time Labor	6110110	SAL-UNION S/T	\$46,096	\$45,164	\$55,564	\$72,892	\$32,902
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Overtime Labor T&1/2	6110120	SAL-UNION T&1/2	\$0	\$1,084	\$3,212	\$2,959	\$9,006
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Overtime Labor DT	6110130	SAL-UNION D/T	80	0\$	0\$	\$158	\$3,586
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Straight Time Labor	6110140	SAL-TEMP F-T S/T	80	0\$	80	80	80
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Straight Time Labor	6110170	SAL-TEMP P-T S/T	\$40,477	\$24,880	\$67,387	80	80
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Straight Time Labor	6110171	SAL-PT TIME MGT S/T	0\$	0\$	0\$	\$3,454	\$13,591
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Straight Time Labor	6110172	SAL-PT TIME C&T S/T	0\$	0\$	0\$	0\$	\$44,449
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Labor	Overtime Labor T&1/2	6110180	SAL-TEMP P-T T&1/2	80	0\$	\$149	80	80
2RD001.001		Labor	Paid Time Off Labor	V&S	Add V&S to Adj-Rec Labor	\$180,854	\$208,272	\$193,344	\$199,666	\$161,719
2RD001.001				Labor	TOTAL LABOR	\$1,181,703	\$1,399,761	\$1,357,367	\$1,446,797	\$1,135,032
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Employee Related	6120019	EMP BEN-TRANSP ALLOW	\$145	\$489	\$126	80	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Employee Recognition	6120145	EMP BEN-GIFT CARDS	\$109	80	\$0	80	80
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130001	EMP TRVL-AIR	\$48,441	\$62,543	\$48,934	\$39,140	\$43,305
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130002	EMP TRVL-RAIL	\$5,992	\$2,334	\$124	\$348	\$471
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Meals	6130010	EMP TRVL-MEALS&TIP	80	\$343	\$0	\$208	\$14
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130011	EMP TRVL-INCIDENTALS	\$430	668\$	\$336	\$288	\$583
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130012	EMP TRVL-MILEAGE	\$13,200	\$19,242	\$16,988	\$13,817	\$12,097
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130014	EMP TRVL-PARKING	\$4,498	\$3,432	\$3,485	\$3,066	\$3,104
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Meals	6130015	EMP TRVL-MEALS/ENT	\$13,157	\$14,243	\$8,004	\$17,499	\$6,861
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130016	EMP TRVL-CAR RENTAL	\$3,655	\$4,294	\$2,522	\$4,753	\$1,346
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130017	EMP TRVL-TAXI/SHUTTL	\$6,066	\$4,943	\$4,369	\$3,725	\$4,184
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130020	EMP TRVL-HOTEL/LODG	\$54,057	\$59,991	\$43,911	\$44,266	\$38,202
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Events	6130023	EMP BEN-CORP EVENTS	\$2,432	80	80	80	80
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Reimburseable	6130035	EMP OTHR-SPOUSE TRVL	80	80	80	80	80
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Employee Reimburseable	6130050	EMP TRVL-OTHER	\$243	\$205	\$312	\$234	\$354
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6211380	MATL-ELECTRIC PARTS	\$2,187	\$2,898	80	80	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6211470	MATL-PRINTED MATERLS	\$372	\$110	\$95	\$113	\$1,858
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6211535	MATL-VEHICLES	\$0	0\$	\$0	\$45,792	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Office/Furn Supplies	6213005	MATL-OFFICE SUPPLIES	\$3,831	\$3,646	\$2,821	\$2,887	\$2,592
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT			6213010	MATL-PCARD/FIELD CD	\$575	\$312	\$526	80	0\$
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Office/Furn Supplies	6213015	MATL-OFC FURNITURE	\$222	80	80	80	\$356
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Office/Furn Supplies	6213020	MATL-OFFICE EQUIPMNT	\$131	\$208	\$10	80	\$142
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Computer Related	6213025	MATL-COMPUTER EQUIP	\$134	\$300	80	\$1,249	\$5,357
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Computer Related	6213030	MATL-SOFTWARE	\$1,610	\$998	\$3,088	80	\$5,392
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	_	Other Materials	6213035	MATL-GAS&DIESEL FUEL	\$273	\$320	\$244	\$951	\$228
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213060	MATL-VEHICLE PARTS	\$0	\$301	\$1,724	\$323	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213065	MATL-TIRES & RECAPS	\$0	80	80	\$2,511	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6213070	MATL-PARTS	\$0	0\$	\$4,319	\$0	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6213080	MATL-REPAIR PARTS	80	80	\$1,438	80	\$1,107
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6213085	MATL-MISCELLANEOUS	\$2,199	\$7,168	\$14,256	\$12,719	\$27,741
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213090	MATL-FREIGHT	\$0	\$180	\$753	\$2,391	\$672
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6213095	MATL-SUBSCR&PUBLICN	\$0	\$154	\$105	\$15	\$400
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT		Other Materials	6213115	MATL-ASPHALT	\$0	\$3,009	\$7,903	80	\$0
2RD001.001	R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213155	MATL-CATHODIC EQUIPM	\$13,125	89,189	\$1,185	OS.	80
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R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213225	MATL-ELECTRIC EQUIP	\$0	\$0	\$37	\$0	\$3,865
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor		6213235	MATL-ENGINEERING EQP	\$31,823	\$1,795	\$0	80	\$36,381
R-RD&D CS TECHNOLOGY DEVELOPMENT B PD &D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213260	MATL-FITTINGS MATE GAS OBEDATIONS	9	\$1,915	\$1,020	08	85 003
P PD&D CS TECHNOLOGI DEVELOFMENT	Non I abor	Other Meterials	6213213	MATE GAS PEGIT ATOPS	0\$	0\$	\$7.816	00	20,502
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213300	MATI-GASES-INDSTRIAL	\$3 447	\$34 743	\$174	\$18 941	\$5.175
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor		6213310	MATL-GAUGES	80	\$0	\$2,168	\$0	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213325	MATL-HARDWARE	(\$27,696)	\$0	\$0	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213340	MATL-LABORATORY SUPP	\$8,245	\$17,505	\$23,915	\$29,063	\$35,591
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213355	MATL-LEAK CLAMPS	80	80	80	80	\$4,770
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213365	MATL-MEASURMT INSTRU	\$8,885	\$36,880	\$11,253	\$0	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor		6213370	MATL-MECHNICAL EQUIP	\$1,324	\$0	\$0	\$0	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213375	MATL-MECHNICAL FITTG	80	80	\$707	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213380	MATL-METALS	80	\$30	\$252	\$337	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213385	MATL-ELEC MISC	\$16,285	\$4,326	\$2,760	\$1,641	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213435	MATL-PIPE WRAPPING	80	\$386	0\$	\$4,948	\$1,514
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213455	MATL-TOOLS	\$12,280	\$5,163	\$23,287	\$73,483	\$41,965
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213470	MATL-PRESS CNTRL FTG	\$3,487	\$6,780	80	80	\$6,262
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213500	MATL-ROCK SAND DIRT	80	\$1,266	80	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor		6213505	MATL-SAFETY	\$0	\$54	80	\$0	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213510	MATL-SAFETY EOUIPMNT	\$0	80	0\$	0\$	\$429
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213525	MATL-METAL PIPE&FITG	80	\$6,458	\$3,893	\$22,088	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6213535	MATL-VALVES	80	80	80	\$6,556	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6215567	MI-PIPE	80	0\$	\$418	\$904	686\$
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Other Materials	6215568	MI-NON PIPE	\$107	\$2,424	\$1,216	\$517	\$9,335
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220001	SRV-CNTRCTRS-ADVISRY	80	80	80	\$254,401	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Consulting	6220002	SRV-CONSULTING	\$24,374	80	80	80	\$75,000
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220004	SRV-CONTRACT LABOR	\$41,612	0\$	0\$	0\$	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220005	SRV-CONTR-MAJOR PROJ	80	\$2,894	80	80	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220007	SRV-CONTR-TIME&EQUIP	\$20,862	80	80	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220008	SRV-CONTRACTORS	80	\$83,859	\$53,984	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220009	SRV-CONTR-SPECFC JBS	0\$	0\$	86\$	\$37,711	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Employee Luncheons	6220060	SRV-CATERING	\$21,606	\$11,708	\$8,534	\$23,265	\$6,686
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Computer Related	6220270	SRV-IT-CONSULTING	80	80	0\$	80	\$56,875
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Computer Related	6220360	SRV-CMPTR ORD FLFLMT	\$1,618	\$187	80	80	\$1,147
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220380	SRV-TEMP AGNCY LABOR	\$57,019	\$107,840	\$23,820	\$48,864	\$31,250
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	0620229	SRV-PRINT/GRAPHICS	\$1,552	\$12,104	\$2,862	\$1,667	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220401	SRV-BUSINESS CARDS	\$622	\$717	\$684	\$103	\$92
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220420	SRV-COPY CENTER	80	80	80	\$426	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220421	SRV-COPY-ENGINEERING	80	80	\$432	\$0	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220422	SRV-COPY-SERVICE CTR	\$372	\$1,663	\$993	\$1,157	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220432	SRV-MAIL-O/NIGHT EXP	80	80	80	\$18	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220433	SRV-MAIL-COURIER	\$0	\$316	\$29	\$0	\$0
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220450	SRV-MAIL-POSTAGE	80	\$1	\$3	\$896	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220470	SRV-MAIL OTHER	\$0	80	80	\$66	\$120
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220480	SRV-ENGINEERING	80	\$13,054	\$1,384	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220500	SRV-GOV T/K-DSGN/BLD	80	80	80	80	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Supplemental Workforce	6220530	SRV-CONSTRUCTN OTHER	\$0	80	\$37,729	\$2,023	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220535	SRV-GOVT PERMITS	80	\$1,488	\$1,630	\$0	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220560	SRV-CONSTRUCTN PAVNG	80	80	\$23,027	(\$22,535)	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220570	SRV-DESIGN	0\$	0\$	\$744	0\$	80
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220580	SRV-ONLINE SRV MISC	\$138	\$271	\$340	\$373	\$1,057
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Purchased Services	6220590	SRV-MISCELLANEOUS	\$240	\$5,209	86\$	\$5,521	\$940
R-RD&D CS TECHNOLOGY DEVELOPMENT	Non-Labor	Consulting	6220600	SRV-CONSULTING-OTHER	\$6,924,034	\$6,671,619	\$6,942,394	\$4,337,774	\$4,727,953

					Fiscal year	2009	2010	2011	2012	2013
2RD001.001	Ц		Purchased Services	6220670	SRV-RESRCH & DEVEL	\$545,265	\$1,054,637	\$277,599	\$1,013,055	\$686,457
2RD001.00	_		Events	6220811	SRV-CUSTOMER EVENT	80	80	80	\$2,188	80
2RD001.001	_	Non-Labor	Events	6220813	SRV-SPNSR BUS & CVC	\$0	\$0	80	\$0	\$5,000
2RD001.00	1	Non-Labor	Purchased Services	6220840	SRV-VEH&EQUIP RENTAL	\$0	80	80	80	\$5,310
2RD001.001		Non-Labor	Purchased Services	6220846	SRV-VEHICLE TOWING	\$0	\$195	\$0	\$0	\$150
2RD001.001	_	Non-Labor	Purchased Services	6220850	SRV-VEH&EQUIP W/OPER	0\$	\$8,635	\$25,539	0\$	\$0\$
2RD001.00	4	1	Furchased Services	6220860	SRV-MAINT/REPAIR	\$4,432	\$5,404	\$4,398	\$8,693	\$1,528
2KD001.001	_	1	1 elephone Expenses	0770000	SR V-FHOINE&COMIMOIN STS	90	070	000 514	\$3,088	000
2RD001.001	_		Contract Services	6220880	SR V-CONSTR-GAS PIPE	\$0	\$0	\$15,969	\$5,176	0
2RD001.000		Non-Labor	Purchased Services	6220910	SKV-HAZ WASTE DISPOS	\$1	\$3,864	9	90	\$0
2RD001.001	11 K-KD&D CS IECHNOLOGY DEVELOPMENT	Non-Labor	Furchased Services	6221010	SR V-S I UKAUE	\$1,961	00	00	04	000
2RD001.001	_	Non-Labor	Purchased Services	6221013	SRV-CORF REC-ARCHIVE SRV-FREIGHT ATDIT	\$3,047	\$1.303	\$12	09	\$720
2RD001.001	-	Non-Labor	Purchased Services	6221050	SRV-LABORATORY	\$9.612	\$14,043	\$15.514	\$9.634	\$6,489
2RD001.001	<u> </u>	Non-Labor	Contract Services	6230004	#SRV-CONTR LBR	\$0	80	80	\$25,440	\$0
2RD001.001	L	Non-Labor	Purchased Services	6230095	SRV-MEDIATION	\$0	\$	\$	\$127	\$0
2RD001.001		Non-Labor	Communication/Adv Svcs	6230140	SRV-MEDIA RELATIONS	\$0	\$432	0\$	\$0	\$0
2RD001.001		Non-Labor	Communication/Adv Svcs	6230160	SRV-NEWS PHOTO	\$6,052	0\$	\$923	80	80
2RD001.001		Non-Labor	Computer Related	6230250	SRV-SFTWR MAINT&LSE	80	0\$	80	\$2,076	80
2RD001.001		Non-Labor	Communication/Adv Svcs	6230390	SRV-PNTG GRPH VIDEO	\$23	\$12,753	\$4,191	80	\$11
2RD001.001		Non-Labor	Office/Furn Supplies	6230434	SRV-COURIER	\$0	\$378	0\$	80	80
2RD001.001			Events	6230540	SRV-HOLIDAY EVENTS	\$2,233	80	80	\$0	80
2RD001.001		Non-Labor	Events	6230680	SRV-EVENT & TICKETS	\$332	80	\$364	\$31	80
2RD001.001		Non-Labor	Events	6230681	SRV-EV & TKT-CHGBK	\$2,537	80	80	80	80
			Purchased Services	6231000	RDD EQUITY INVSTMNTS	\$0	\$1,378,006	\$2,703,609	\$639,947	\$250,000
		Non-Labor	Dues	6250000	Dues	\$299,136	\$22,150	80	\$0	\$0
		Non-Labor	Dues	6250001	DUES-BUSINESS/PROFES	\$716,787	\$1,509,635	\$781,417	\$151,196	\$768,997
	_	Non-Labor	Purchased Services	6260001	VEH-EXPRD AMORT-EXTE	80	80	\$97,761	80	80
ZRD001.001			Misc NL Costs	6310020	PMT FOR EASEMENT / R	\$0	0\$	0\$	\$37	\$0
7 ZKD001:001	4	Ì	1 elephone Expenses	032000	TELE/COMIMOINICATIONS	980	\$1,111	\$000 \$000	66%	6/4
2RD001.001	11 R-KD&D CS IECHNOLOGI DEVELOPMENT	Non-Labor	Telephone Expenses	6320001	TELE-COMM STS COSIS	\$377	4/C¢	0\$ 050	04 570	0000
2PD001.001	4	1	Telephone Expenses	6320002	TELE-CELLOLAN FRONES	47,302	4/4/4	43,700	40,379	04,220
2BD001.001	4	Ļ	Telephone Expenses	6320010	MEASTIBED BISINESS II	010	910	2004	\$20 \$1 740	01.052
2RD001.001	PEND&D CS IECHNOLOGI DEVELOPMENT	Non Labor	Miss NI Costs	6320010	Cash Discounts on Du	\$0	04	9200	31,749	41,932
2RD001.001	_	Non-I abor	Misc NI Costs	6350742	MISC CHARGES	\$33.701	(150)	(70)	888	(014)
2RD001.001		Non-Labor	Misc NI. Costs	6405012	A&G-GOVT PMTS-PERMIT	\$30,500	0\$	\$493	0\$	0\$
2RD001.001				Non-Labor	TOTAL NON-LABOR	\$8,989,617	\$11,264,366	\$11,287,999	\$6,919,570	\$6,945,173
2RD001.001				TOTAL ALI		\$10,171,320	\$12,664,126	\$12,645,366	\$8,366,368	\$8,080,205
	AT MOM DEDENIAGED GREAT AND					-07		00000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100
1000	SHAKED SEKVICES TOTAL	-	Ē	0000117	H o H o C o c a c a c a c a c a c a c a c a c a c	\$2,697,105	\$3,972,435	\$5,180,992	\$5,310,652	\$4,987,291
2200-0234	NGV PROGRAMI	Labor	Straight Time Labor	6110020	SAL-MGMI S/I	\$3.28,008	200,2004	\$493,082	\$489,711	\$483,131 \$47.878
2200-0234	NGV PROGRAM	Labor	Straight Time Labor	6110110	SAL-UNION S/T	020,24	0\$	2/2,27	\$11,748	8/8,214
2200-0234	NGV PROGRAM	Labor	Other Labor	6110256	SAL-MISC	\$1.294	0\$	\$0	\$2.631	\$1.679
2200-0234	NGV PROGRAM	Labor	Paid Time Off Labor	V&S	Add V&S to Adj-Rec Labor	\$103,669	\$105,863	\$89,404	\$85,540	\$88,034
2200-0234	NGV PROGRAM	Lapor		Lapor	TOTAL LABOR	8626,098	\$710,818	\$627,658	\$619,830	\$617,721
2200-0234	NGV PROGRAM	Non-Labor	Employee Related	6120053	EMP BEN-MISC	80	0\$	0\$	80	80
2200-0234	NGV PROGRAM	Non-Labor	Employee Recognition	6120145	EMP BEN-GIFT CARDS	\$0	0\$	0\$	\$102	\$0
2200-0234	NGV PROGRAM	Non-Labor	Employee Reimburseable	6130001	EMP TRVL-AIR	\$1,399	\$5,096	\$5,445	\$5,631	\$12,814
2200-0234	NGV PROGRAM	Non-Labor	Employee Reimburseable	6130002	EMP TRVL-RAIL	\$102	\$324	\$52	0\$	\$137
2200-0234	NGV PROGRAM	Non-Labor	Employee Reimburseable	6130011	EMP TRVL-INCIDENTALS	\$5	\$36	\$14	\$0	\$31
2200-0234	NGV PROGRAM	Non-Labor	Employee Reimburseable	6130012	EMP TRVL-MILEAGE	\$21,729	\$21,263	\$14,328	\$15,694	\$15,647
2200-0234	NGV PROGRAM	Non-Labor	Employee Reimburseable	6130014	EMP TRVL-PARKING	\$433	909\$	\$617	\$920	\$732
2200-0234	NGV PROGRAM	Non-Labor	Employee Meals	6130015	EMP TRVL-MEALS/ENT	\$1,874	\$2,648	\$2,669	\$2,189	\$2,734

Non-laber Emphysical Relationship S1910
Emplyone Reinhurscache 6 (37007) BAPP TRAV. JAMS 18171 SS 95 84,900 SS 95 870 SS 10 Emplyone Reinhurscache 6 (37007) BAPP TRAV. JAMS 18171 SS 95 80 SS 95 SS 100 Emplyone Reinhurscache 6 (37007) BAPP TRAV. JAMS 18171 SS 95 SS 95 SS 95 SS 100 Emplyone Reinhurscache 6 (37007) BAPP TRAV. JAMS 18171 SS 95 SS 9
Employee Reinformerable (1970)
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Office Plant Supples G23 905 MATL-OFFICE SUPLIES SS 98 SP 99 SP 90 Office Plant Supples G23 905 MATL-OFFICE SUPLIES SS 93 SS 93 SS 90 Compour Related G21 905 MATL-OFFICE SUPLIES SS 93 SS 93 SS 90 Compour Related G21 905 MATL-OFFICE SUPLIES SS 93 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 124 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis G21 905 MATL-ORPURE SUPLIES SS 90 SS 90 SS 90 Other Marchis
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Componer Related (2) 3035 MATH-SOCHREEL FULL SS3 SS9 SS9 Other Materisk (2) 3035 MATH-SOCHREEL FULL SS3 SS9 SS9 Other Materisk (2) 3035 MATH-SOCHREEL FULL SS9 SS9 SS9 Other Materisk (2) 3085 MATH-SOCHREEL FULL SS27 S11,01 SS910 S1794 Other Materisk (2) 3085 MATH-SOCHREEL FULL SS27 S11,01 S5310 S1794 Other Materisk (2) 3085 MATH-CANDIVAL RELAXIONAL SS9 SS9 SS9 SS9 Other Materisk (2) 3480 MATH-CANDIVAL RELAX S0 SS9 SS9 Other Materisk (2) 3480 MATH-CRINOTAL RELAX S0 SS9 SS9 Other Materisk (2) 3480 MATH-CRINOTAL RELAX S0 SS1 SS1 CommunicationArds Verse (2) 3480 MATH-CRINOTAL RELAX S0 S0 S0 CommunicationArds Verse (2) 3480 MATH-CRINOTAL RELAX S0 S0 S0 Com
Other Materials (2) 3035 MATL-CARSDEEL PUEL \$54 \$65 \$66 Other Materials (2) 3035 MATL-CARPELLANEGUS \$2,201 \$52,91 \$12,81 \$60 Other Materials (2) 3085 MATL-CARLANEGUS \$2,201 \$52,94 \$50 \$62,94 Other Materials (2) 3180 MATL-CARLANEGREPUBLICH \$52,27 \$11,90 \$52,94 \$52,94 Other Materials (2) 3180 MATL-CARLANEGUS \$52,97 \$11,90 \$52,94 \$56 CommunicationArds Sees (2) 3435 MATL-RELACHITIES \$376 \$2,888 \$34,94 \$31,1 \$30 CommunicationArds Sees (2) 3435 MATL-TELOPHEAS \$376 \$2,888 \$467,291 \$31,1 CommunicationArds Sees (2) 3450 MATL-TELOSHORIAN \$376 \$2,888 \$467,291 \$31,1 CommunicationArds Sees (2) 3500 MATL-TELOSHORIAN \$80 \$30 \$31,1 \$31,1 \$32,1 \$32,1 \$32,1 \$32,1 \$32,1 \$32,1 \$32,1 \$32,1
Other Materials 6213085 MATLANDY FIJEL Sp.93 S.201 S.50 Other Materials 6213085 MATLANDY RUEL S.2,93 S.201 S.794 Other Materials 6213085 MATLASICELLAREOUS S.2,93 S.90 S.794 Other Materials 6213086 MATLACOPIETR S.90 S.90 S.91 Computer Rained 6213180 MATLACOPIETR S.90 S.90 S.91 Computer Rained 6213180 MATLACOPIETR S.91 S.90 S.91 Communication Act Street 621380 MATLACOPIETR S.91 S.91 S.91 Communication Act Street 621380 MATLACOPIETR S.91 S.91 S.91 Communication Act Street 621380 MATLACOPIETR S.91 S.91 S.91 Communication Act Street 621300 SRV-CONSULITION S.91 S.91 S.91 Communication Act Street 622000 SRV-CONSULITION S.91 S.91 S.91 Communication Act Street 622000
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Other Materials 62,13,092 MATL-SUBS MERCHGILLAN 85,25 31,10 85,19 Other Materials 62,13,180 MATL-COMPUTR HARDWAR \$50 \$2,13 80 \$43,2 Other Materials 62,13,180 MATL-COMPUTR HARDWAR \$50 \$50 \$54,3 Offer Fun Supplies 62,13,180 MATL-COMPUTR HARDWAR \$50 \$50 \$50 Computer Related 62,13,60 MATL-CONTRIBLE WARD \$51,50 \$50 \$51 Communication Adv Secs 62,13,60 MATL-TELECOM EQUIPMY \$51,60 \$50 \$51 Communication Adv Secs 62,13,60 MATL-TELECOM EQUIPMY \$51,60 \$50 \$51 Communication Adv Secs 62,20,00 SRV-COVENILTING \$50 \$50 \$50 Communication Adv Secs 62,20,00 SRV-ADYRENGRAPH \$50 \$50 \$51 Communication Adv Secs 62,20,00 SRV-ADYRENGRAPH \$50 \$50 \$51 Communication Adv Secs 62,20,00 SRV-ADYRENGRAPH \$50 \$51 \$51,00
Communication Advisors 6513189 Adv11-COMPUTR HANDWAR \$705 \$2,049 \$666 \$433 Communication Advisors 6213180 MAT1-COMPUTR HANDWAR \$705 \$9 \$234 \$513 Communication Advisors 6213180 MAT1-RECHERIS \$8,576 \$8,288 \$3,491 \$8,11 Telephone Expenses 6213460 MAT1-RECHERISCHER SIST \$8,898 \$8,944 \$8,11 Telephone Expenses 6220002 SRV-CONTR-TIME EVENT \$8,308 \$8,946 \$8,11 Communication Advisors 6220007 SRV-CONTR-TIME EVENT \$8,308 \$8,304 \$8,00 Supplemental Workforce 6220007 SRV-CONTR-TIME EVENT \$8,304 \$8,304 \$8,304 Communication Advisors 6220030 SRV-ADVI & MATCH SIGNAM \$8,304 \$8,304 \$8,304 Communication Advisors 6220030 SRV-ADVI & MATCH SIGNAM \$8,304 \$8,304 \$8,304 Communication Advisors 6220030 SRV-ADVI & MATCH SIGNAM \$8,304 \$8,304 \$8,304 Communication Advisors
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Communication/Adv Sves 6213480 MATI_TERMONTHILIEMS 81376 \$5147 \$5117 Communication/Adv Sves 6213480 MATI_TIERCAM EQUIPMT \$116 \$15 \$17 \$17 Combiting 6213560 MATI_TIERCAM EQUIPMT \$10,867 \$22,25,12 \$25,394 \$467,291 \$18 Combiting 6210002 SRV-CONRTING \$8,007 \$10,867 \$22,25,12 \$25,394 \$467,291 \$8 Communication/Adv Sves 6220050 SRV-CONRTING \$8,007 \$11,299 \$61,18 \$11,209 \$11,209 \$10,000 \$80,007 \$10,000 \$80,007 \$10,000 \$80,007 \$10,000 \$80,007 \$11,209 \$61,18 \$11,209 \$10,000 \$10
Telephone Expenses 62138500 MATL-TELECOM BQUIPMT \$115 \$314 \$76 \$31 Other Materials 62138500 MATL-TELECOM BQUIPMT \$2,088 \$36 \$51 \$51 Consulting 6213860 MATL-TELECOM BQUIPMT \$21,066 \$30 \$50
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Communication Adv Sve C220007 SRV-CONNULLING S10,265 S22,515 S46,251 S57,8 Communication Adv Sve 6220007 SRV-CONNULLING 8,0072 \$6072 \$80,578 \$80,072 \$81,410 \$83,598 Communication Adv Sve 6220050 SRV-ADDYT & MKTG PUBL \$80,072 \$11,205 \$10,410 \$83,598 Market Research 6220051 MARKET RESEARCH \$80,072 \$11,205 \$11,205 Communication Adv Sve 6220115 SRV-ACTERING \$80,77 \$11,205 \$11,205 Communication Adv Sve 6220115 SRV-CATTRONER \$10,816 \$10 \$11,205 Communication Adv Sve 6220300 SRV-DENDRENTS \$10,816 \$10 \$11,205 Communication Adv Sve 6220402 SRV-DENDRENTS \$10,816 \$10 \$10,816 Communication Adv Sve 6220403 SRV-DENDRENTS \$10 \$11,45 \$10,61 Communication Adv Sve 6220403 SRV-DENDRENTS \$10 \$10 \$10 \$10 Communication Adv
Outpermentation/Adv Sves 622000 SIN-ADT Relight \$6,072 \$15,076 \$10,406 \$35,378 Communication/Adv Sves 6220005 SRV-ADVTR MIKTICREBARCH \$8,047 \$11,299 \$10,466 \$25,928 \$35,878 Communication/Adv Sves 6220005 SRV-ADVTR MIKTICREBARCH \$80,97 \$11,299 \$10,466 \$25,928 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$15,275 \$10,466 \$10,466 \$10,466 \$10,476 \$10,466 \$1
Communication/Adv Sves 6220020 SN-ADVRTSNGMENT SS, 304 \$15,275 \$1,410 \$25,208 Communication/Adv Sves 6220051 MARKE RESEARCH \$8,304 \$15,215 \$1,410 \$35,576 \$8 Employee Luncheory 6220065 SRV-ADVITGNORADINEST \$60 \$10,296 \$61,105 \$87.00 \$80 \$87.576 \$8 Employee Luncheory 6220016 SRV-ACATTERING \$60 \$60 \$80 \$80 \$81,295 \$61,105 \$80 \$80 \$81,207
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Employee Luncheons 6220060 SRV-CATERING \$697 \$11,299 \$6,118 \$11,293 Communication/Adv Sves 6220191 SRV-CATERING \$10,816 \$0 \$0 \$1,205 Communication/Adv Sves 6220190 SRV-TEMP AGINCY LABOR \$10,816 \$0 \$0 \$1,205 Supplemental Workforce 6220190 SRV-TEMP AGINCY LABOR \$10,816 \$0 \$0 \$1,526 Communication/Adv Sves 6220401 SRV-PRINTG STATIONERY \$12,416 \$10,77 \$11,686 Communication/Adv Sves 6220402 SRV-PRINTG STATIONERY \$1 \$1 \$1 \$1 Communication/Adv Sves 6220420 SRV-COPY CERITER \$1 \$0 \$1,145 \$1 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2
Communication/Adv Svcs 6220115 SRV-OUTDOOR ADVERTIS \$0 \$0 \$19.26 Purchased Services 6220390 SRV-SECURITY \$10.816 \$0 \$0 \$10.86 Supplemental Workforce 6220390 SRV-TEMP AGNCY LABOR \$10.816 \$0 \$0 \$0 Communication/Adv Svcs 6220401 SRV-PRINT/GRAPHICS \$15,446 \$12,077 \$15,317 \$10.686 Communication/Adv Svcs 6220402 SRV-PRINT/GRAPHICS \$10.81 \$20 \$50 Communication/Adv Svcs 6220420 SRV-PRINT/GRAPHICS \$1,45 \$51.01 \$1.17 Communication/Adv Svcs 6220420 SRV-COPY-EENTER \$1,45 \$971 \$1,101 Purchased Services 6220420 SRV-COPY-EENTER \$1,053 \$1,45 \$971 \$1,101 Purchased Services 6220430 SRV-MAIL-SPEC PROJ \$90 \$0 \$0 \$1,50 Purchased Services 6220443 SRV-MAIL-SPEC PROJ \$1,63 \$1,44 \$9,10 \$1,01 Purchased Services <td< td=""></td<>
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					Fiscal year	2009	2010	2011	2012	2013
2200-0234 N	NGV PROGRAM	Non-Labor	Dues	6250002	DUES-SOCIAL	\$3,037	80	80	80	80
	NGV PROGRAM	Non-Labor		6320001	TELE-COMM SYS COSTS	\$20	80	80	80	80
2200-0234 N	NGV PROGRAM	Non-Labor		6320002	TELE-CELLULAR PHONES	\$7,206	\$8,012	\$5,087	\$5,176	\$5,099
2200-0234 N	NGV PROGRAM	Non-Labor	Telephone Expenses	6320005	TELE-PBX SERVICES	80	80	\$1,209	80	\$0
2200-0234 N	NGV PROGRAM	Non-Labor	Telephone Expenses	6320010	MEASURED BUSINESS LI	80	0\$	\$1,051	\$973	\$299
2200-0234 N	NGV PROGRAM	Non-Labor		Non-Labor	TOTAL NON-LABOR	\$755,000	\$768,001	\$838,484	\$1,276,228	\$814,651
2200-0234 N	NGV PROGRAM	TOTAL		TOTAL ALI		\$1,431,098	\$1,478,819	\$1,466,142	\$1,896,058	\$1,432,373
	BUSINESS STRATEGY AND DEVELOPMENT	Labor	Straight Time Labor	6110020	SAL-MGMT S/T	\$427,379	\$344,838	\$353,522	\$313,731	\$422,104
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Labor	Straight Time Labor	6110080	SAL-CLERICAL/TECH ST	\$12,582	\$7,555	\$10,030	\$6,077	\$11,850
	BUSINESS STRATEGY AND DEVELOPMENT	Labor	Other Labor	6110256	SAL-MISC	\$8,117	\$232	0\$	0\$	\$3,539
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Labor	Paid Time Off Labor	V&S	Add V&S to Adj-Rec Labor	\$78,136	\$58,881	\$60,386	\$51,201	\$72,711
_	BUSINESS STRATEGY AND DEVELOPMEN	Labor		Labor	TOTAL LABOR	\$526,213	\$411,505	\$423,937	\$371,009	\$510,205
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Reimburseable	6130001	EMP TRVL-AIR	80	80	\$125	\$8,776	\$7,047
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6130002	EMP TRVL-RAIL	\$1,933	\$7,366	\$7,289	\$2,669	\$3,486
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employ	6130010	EMP TRVL-MEALS&TIP	\$776	\$1,095	\$695	0\$	\$83
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6130011	EMP TRVL-INCIDENTALS	80	\$369	80	\$43	\$62
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Reimburseable	6130012	EMP TRVL-MILEAGE	\$984	\$1,033	\$684	\$1,399	\$2,506
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Reimburseable	6130014	EMP TRVL-PARKING	\$48	\$614	\$487	\$1,260	\$489
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Meals	6130015	EMP TRVL-MEALS/ENT	\$290	\$2,467	\$2,646	\$4,315	\$3,707
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6130016	EMP TRVL-CAR RENTAL	\$725	\$800	\$165	\$220	80
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Reimburseable	6130017	EMP TRVL-TAXI/SHUTTL	\$308	\$604	\$331	\$924	\$883
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Reimburseable	6130020	EMP TRVL-HOTEL/LODG	\$2,588	\$5,714	\$4,304	\$8,035	\$5,921
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6130050	EMP TR VL-OTHER	\$549	\$364	8\$	80	\$11
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6211470	MATL-PRINTED MATERLS	\$593	0\$	\$380	0\$	\$40
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Office/Furn Supplies	6213005	MATL-OFFICE SUPPLIES	80	80	826	\$0	\$772
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Office/Furn Supplies	6213015	MATL-OFC FURNITURE	\$7	\$153	\$121	\$0	\$384
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Computer Related	6213025	MATL-COMPUTER EQUIP	\$0	\$0	\$145	\$198	\$256
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Computer Related	6213030	MATL-SOFTWARE	80	80	\$3,064	\$0	\$735
_	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Other Materials	6213035	MATL-GAS&DIESEL FUEL	80	80	80	\$160	80
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6213085	MATL-MISCELLANEOUS	\$12	0\$	80	80	\$414
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6213095	MATL-SUBSCR&PUBLICN	0\$	\$6,438	0\$	80	(\$16,166)
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Computer Related	6213180	MATL-COMPUTR HARDWAR	829	\$429	\$2,960	\$881	\$1,705
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Luncheons	6220060	SRV-CATERING	\$0	\$0	\$103	\$922	\$906
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Computer Related	6220360	SRV-CMPTR ORD FLFLMT	\$0	08	80	\$181	80
+	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220401	SKV-BUSINESS CARDS	\$I\$	S L	\$0	\$139	08
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT BITCHIESS STRATEGY AND DEVELOPMENT	Non-Labor	Communication/Adv Svcs	6220422	SRV-COPY-SERVICE CIR	9	671 543	\$13	170 170	\$102.004
	BUSINESS SINAIEGI AND DEVELOFMENT	Non-Labor	Punchased Services	6550669	SINVENTICE COUNTER	000	47.1,042	4110,042	4234,601	\$103,664
	SUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		052020	SRV-MISCELL ANFOLIS	0\$	0\$	\$1.253	\$466	1416
L	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor		6220600	SRV-CONSULTING-OTHER	\$17,810	\$119,057	\$179,964	\$292,103	\$294,203
2200-2229 B	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Employee Training	6220640	SRV-TRNG & SEM IN-H	0\$	80	26\$	\$29	\$1,498
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Dues	6250001	DUES-BUSINESS/PROFES	\$3,746	\$21,945	\$23,710	\$13,850	\$53,102
-	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Telephone Expenses	6320000	TELE/COMMUNICATIONS	80	\$0	\$3,023	\$0	\$4,215
	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Telephone Expenses	6320002	TELE-CELLULAR PHONES	80	80	\$0	\$3,630	\$3,341
\dashv	BUSINESS STRATEGY AND DEVELOPMENT	Non-Labor	Misc NL Costs	6350742	MISC CHARGES	80	80	80	\$382	80
+	BUSINESS STRATEGY AND DEVELOPMEN	Non-Labor	ı	Non-Labor	TOTAL NON-LABOR	\$30,766	\$240,344	\$348,861	\$595,662	\$473,632
	BUSINESS STRATEGY AND DEVELOPMEN	TOTAL		TOTAL ALI	THE P. LEWIS CO., LANSING, MICH. 49, 197	\$556,979	\$651,849	\$772,799	\$966,671	\$983,837
_	BIOFUELS & LOW-CRBN RESRCS MKT DEV	Labor	Straight Time Labor	6110020	SAL-MGMT S/T	\$190,006	\$341,900	\$306,487	\$190,651	\$113,638
+	BIOFUELS & LOW-CRBN RESRCS MKT DEV	Labor	Straight Time Labor	6110110	SAL-UNION S/I	\$0	\$0	\$69	\$244	\$158
+	BIOFUELS & LOW-CRBN RESRCS MKT DEV	Labor	Overtime Labor 1 & 1/2	6110120	SAL-UNION T&I/2	80	\$0	80	\$38	80
+	BIOFUELS & LOW-CRBN RESRCS MKT DEV	Labor	Straight Time Labor	6110170	SAL-TEMP P-T S/T	\$0	\$0	\$207	\$0	80
2200-2286 B	BIOFUELS & LOW-CKBN RESKCS MKI DEV	Labor	Straight Time Labor	61101/3	SAL-PI TIME UN S/I	\$0.00	0\$	\$0.024	158	\$10,012
	BIOFUELS & LOW-CRBIN RESIRCS MINI DEV	Labor	raid Time On Labor	Lohon	TOTAL 1 ABOR	\$34,334	4300,260	4367 530	430,377	\$10,913
	BIOFUELS & LOW-CABIN RESIDES MATTER	Men I oben	Tanana	Labor 2120001	EMPTEM ATE	0464,477	621.60	720,1554	105,120	\$132,709
7700-7790 P	SIUFUELS & LUW-CRDIN RESERVS IVINT DE Y J	Non-Labor	Employee Kelmburseable	0120001	EMF IKVL-AIK	0+0¢	34,103	74,71	\$3,383	\$2,005

SRCS MKT DEV SRCS MKT DEV Non-Labor Employee Reimburseable SRCS MKT DEV Non-Labor Communication/Adv Svcs SRCS MKT DEV Non-Labor Office/Furn Supplies SRCS MKT DEV Non-Labor Office/Furn Supplies SRCS MKT DEV Non-Labor Office/Furn Supplies SRCS MKT DEV Non-Labor Other Materials SRCS MKT DEV Non-Labor Computer Related SRCS MKT DEV	+++++++++++++++++++++++++++++++++++++++	EMP TRVL-RAIL EMP TRVL-MEALS&TIP EMP TRVL-MEALS&TIP EMP TRVL-MEALS&TIP EMP TRVL-MEALSENT EMP TRVL-AREALSENT EMP TRVL-CARE RENTAL EMP TRVL-CARE RENTAL EMP TRVL-CARE RENTS EMP TRVL-OTHER MATL-ORPEC SUPPLES MATL-ORPICE SUPPLES MATL-CORPECE SUPPLES MATL-SUBSCR&PUBLICN MATL-SUBSCR&PUBLICN MATL-SUBSCR&PUBLICN MATL-SUBSCR&PUBLICN MATL-COMPUTR HARDWAR SRV-CATERING SRV-COPT-SERVICE CTR SRV-COPT-SERVICE CTR SRV-ENGINEERING SRV-ENGINEERING	\$949 \$5.913 \$191 \$191 \$879 \$850 \$85 \$850 \$850 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$8	\$631 \$631 \$1,851 \$1,390 \$697 \$807 \$2,151 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$11 \$0 \$2,169 \$245 \$1,201 \$1,201 \$1,301 \$1,919 \$0 \$0 \$0 \$451 \$43 \$1,41 \$14 \$14 \$14 \$14 \$14 \$14 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16	\$000 \$000 \$000 \$000 \$000 \$000 \$000 \$00	\$0 \$44 \$1,099 \$386 \$288
Non-Labor Employee Meals Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Office/Furn Supplies Non-Labor Other Materials Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Straight Time Labor		P TRVL-MEALS&TIP P TRVL-MILEAGE P TRVL-PARKING P TRVL-PARKING P TRVL-CAR RENTAL P TRVL-CAR RENTAL P TRVL-CAR RENTAL P TRVL-CAR PENTS P TRVL-OTHER P TRVL-OTHER TL-PRINTED MATERLS TL-SOFTWARE TL-SOFTWARE TL-SUBCR&PUBLICS T-SUBCR&PUBLICS T-SUBCRAPHICS T-CATERING T-C	\$2,913 \$191	\$1,851 \$458 \$1,390 \$697 \$897 \$2,151 \$0 \$0 \$0 \$2 \$29 \$29 \$29 \$28 \$28 \$28 \$28 \$28 \$28 \$28 \$28 \$32 \$38 \$32 \$80 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$6	\$2,169 \$245 \$1,201 \$1,201 \$1,201 \$1,301 \$1,919 \$0 \$0 \$0 \$451 \$43 \$114 \$114 \$57	\$0 \$931 \$270 \$1,561 \$375 \$859	\$44 \$1,099 \$386 \$288
Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Office-Furn Supplies Non-Labor Office-Furn Supplies Non-Labor Other Materials Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL		PTRVL-MILEAGE PTRVL-PARKING PTRVL-PARKING PTRVL-CAR RENTAL PTRVL-CAR RENTAL PTRVL-CAR RENTAL PTRVL-CAR PENTAL PTRVL-CAR PENTAL PTRVL-CAR PENTAL PTRVL-OTHER PTRVL-OTHER TL-PRINTED MATERLS TL-SUBCIESEL FUEL TL-MISCELLANEOUS TL-SUBCR&PUBLICN TL-SUBSCR&PUBLICN TL-COMPUTR HARDAR TL-COMPUTR HARDAR TL-CONSULTING A-ADVETSNG&MKTG TL-COMPUTR RESERVICES C-CONSULTING A-ADVETSNG&MKTG T-CATERING	\$2,913 \$191 \$191 \$279 \$870 \$85 \$05 \$25 \$25 \$25 \$25 \$25 \$25 \$25 \$2	\$1,851 \$458 \$1,390 \$697 \$807 \$2,151 \$0 \$0 \$0 \$0 \$2,80	\$2,169 \$245 \$1,201 \$1,201 \$1,314 \$1,919 \$0 \$0 \$0 \$451 \$451 \$43 \$143 \$143 \$143 \$143 \$143 \$143 \$143	\$931 \$270 \$1,561 \$375 \$859	\$1,099 \$386 \$288
Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Office-Fum Supplies Non-Labor Office-Fum Supplies Non-Labor Other Materials Non-Labor Computer Related Non-Labor Other Materials Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Straight Time Labor TotAL TotAL		PTRVL-PARKING PTRVL-MEALSENT PTRVL-CAR RENTAL PTRVL-CAR RENTAL PTRVL-TAXI/SHUTTL PTRVL-OTHER TL-PRINTED MATERLS TL-PRINTED MATERLS TL-SOFTWARE TL-CORPUSED FUEL TL-MISCELLANEOUS TL-SUBSCR&PUBLICN TL-COMPUTR HARDWAR TL-CONSULTING TL-CONSULTING T-CONSULTING T-CONSULTING T-CATERING T-CATER	\$279 \$279 \$870 \$88 \$850 \$80 \$0 \$25 \$25 \$0 \$0 \$60 \$40 \$40 \$40 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$6	\$458 \$1390 \$897 \$897 \$2,151 \$0 \$0 \$0 \$2,80	\$245 \$1.201 \$1.201 \$1.34 \$1.919 \$0 \$0 \$0 \$451 \$451 \$451 \$451 \$45 \$45 \$45 \$45 \$45 \$45 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6 \$6	\$270 \$1,561 \$375 \$859	\$386
Non-Labor Employee Meals Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Other Materials Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL TOTAL		PTRVL-MEALS/ENT PTRVL-CAR RENTAL PTRVL-CARR RENTAL PTRVL-TAXISHUTTL PTRVL-OTHER TIL-SUB-CORP EVENTS TIL-PRINTED MATERLS TIL-ORSEDIESEL FUEL TIL-GASEDIESEL FUEL TIL-GASEDIESEL FUEL TIL-GASEDIESEL FUEL TIL-GASEDIESEL FUEL TIL-GASEDIESEL FUEL TIL-COMPUTR HARDWAR TIL-TOWN T	\$279 \$870 \$85 \$580 \$580 \$0 \$25 \$0 \$77 \$77 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60	\$1,390 \$897 \$820 \$2,151 \$0 \$0 \$0 \$0 \$29 \$29 \$29 \$29 \$29 \$29 \$20 \$20 \$20 \$20 \$20 \$20 \$20 \$20 \$20 \$20	\$1,201 \$134 \$733 \$1,919 \$0 \$0 \$0 \$451 \$451 \$451 \$451 \$60 \$0 \$451 \$451 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60	\$1,561 \$375 \$859	\$288
Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Events Non-Labor Events Non-Labor Communication/Adv Svcs Non-Labor Other Materials Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL		PTRVL-CAR RENTAL PTRVL-IAXI/SHUTTL PTRVL-HOTEJ/LODG PTRVL-HOTEJ/LODG PTRVL-OTHER TL-PRINTED MATERLS TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-SOFTWARE TL-MISCELLANEOUS TL-SOFTWARE TL-COMPUTR HARDWAR TL-COMPUTR HARDWAR TL-COMPUTR HARDWAR TL-CONSULTING -/-CONSULTING -/-CONSULTING -/-CONSULTING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-PUBLICTING&SUBSCR -/-PUBLICTING&SUBSCR -/-PUBLICTING&SUBSCR -/-COPY-SERVICE CTR -/-PUBLICTING&SUBSCR -/-COPY-SERVICE CTR -/-ENGINEERING -/-COPY-SERVICE CTR	\$870 \$85 \$550 \$550 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$820 \$820 \$820 \$80 \$0 \$0 \$29 \$29 \$148 \$148 \$116 \$16 \$16 \$16 \$16 \$16 \$17 \$16 \$17 \$18 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16	\$134 \$733 \$1,919 \$0 \$0 \$0 \$451 \$451 \$451 \$451 \$451 \$451 \$451 \$453 \$451 \$451 \$451 \$451 \$451 \$451 \$451 \$451	\$375	
Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Communication/Adv Sves Non-Labor Other Materials Non-Labor Computer Related Non-Labor Communication/Adv Sves Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL Straight Time Labor		P TRVL-TAXI/SHUTTL P TRVL-HOTEL/LODG P BEN-CORP EVENTS P BEN-CORP EVENTS TL-PRINTED MATERLS TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-OFFICE SUPPLIES TL-ORSUBSCREAPUBLICN TL-COMPUTR HARDWAR TL-CUSTOMER EVENT	\$85 \$550 \$250 \$25 \$0 \$0 \$0 \$0 \$244 \$4,580 \$0 \$0 \$244 \$4,580 \$0 \$0 \$0 \$244 \$1,60 \$0 \$0 \$244 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$20 \$2.151 \$0 \$0 \$0 \$0 \$29 \$29 \$148 \$148 \$116 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$1	\$733 \$1,919 \$0 \$0 \$0 \$451 \$43 \$43 \$114 \$0 \$0 \$0 \$0 \$451 \$0 \$451 \$0 \$451 \$0 \$451 \$0 \$451 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$859	\$768
Non-Labor Employee Reimburseable Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Office-Fum Supplies Non-Labor Other Materials Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL Straight Time Labor		P TRVL-HOTEL/LODG P BEN-CORP EVENTS P TRVL-OTHER TIL-PRINTED MATERLS TIL-OFFICE SUPPLES TIL-SOFTWARE TIL-SUBPLES TIL-SUBPLES TIL-SUB-SCR&PUBLICN TIL-SUB-SCR&PUBLICN TIL-SUB-SCR&PUBLICN TIL-COMPUTR HARDWAR TIL-CUSTOMER EVENT RCHASED SERVICES -/-CONSULTING -/-ADRUCTSCRACH -/-CATERING -/-COPT-SERVICE CTR -/-COPT-SERVICE CTR -/-COPT-SERVICE CTR -/-COPT-SERVICE CTR -/-COPT-SERVICE CTR -/-ENGINEERING	\$550 \$0 \$25 \$0 \$0 \$0 \$0 \$60 \$40 \$240 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$2,151 \$0 \$0 \$0 \$0 \$29 \$0 \$29 \$0 \$148 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16	\$1,919 \$0 \$0 \$0 \$0 \$451 \$431 \$114 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$451 \$14 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	0100	\$499
Non-Labor Employee Reimburseable Non-Labor Communication/Adv Svcs Non-Labor Office-Fum Supplies Non-Labor Other Materials Non-Labor Other Market Research Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Misc NL Costs TOTAL TOTAL Straight Time Labor		P BEN-CORP EVENTS P TRYL_OTHER TIL-PRINTED MATERLS TIL-OFFICE SUPPLIES TIL-SOFTWARE TIL-SUBSCREAPUBLICN TIL-SUBSCREAPUBLICN TIL-COMPUTR HARDWAR TIL-COMPUTR HARDWAR TIL-COMPUTR HARDWAR TIL-CONSULTING 7-ADVINTGRAPHICS 7-ADVINTGRAPHICS 7-APUBLICTNS&SUBSCR 7-EVBLICTNS&SUBSCR 7-EVBLICTNS&SUBSCR 7-EVBLICTNS&SUBSCR 7-EVBLICTNS&SUBSCR 7-EVBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS&SUBSCR 7-ENBLICTNS	\$0 \$25 \$0 \$77 \$0 \$80 \$40 \$40 \$40 \$40 \$40 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$60 \$6	\$0 \$0 \$29 \$29 \$28 \$28 \$148 \$148 \$116 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$1	\$0 \$0 \$0 \$451 \$43 \$114 \$0 \$0 \$0 \$0 \$0	\$1,5/3	\$3,549
Non-Labor Communication/Adv Svcs Non-Labor Office-Furn Supplies Non-Labor Office-Furn Supplies Non-Labor Other Materials Non-Labor Computer Related Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Labor Straight Time Labor		TIL-OFTGE SUPPLIES TIL-OFTGE SUPPLIES TIL-OFTGE SUPPLIES TIL-SOFTWARE TIL-GAS&DIESEL FUEL TIL-GAS&DIESEL FUEL TIL-GAS&DIESEL FUEL TIL-COMPUTR HARDWAR TIL-COMPUTR HARDWAR TIL-CUSTOMER EVENT TIL-COMPUTR HARDWAR TIL-CUSTOMER EVENT TIL-COMPUTR HARDWAR TIL-CUSTOMER EVENT TIL-CUSTOMER	\$25 \$80 \$77 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$80 \$80	\$0 \$0 \$29 \$29 \$28 \$28 \$148 \$116 \$116 \$32,589 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16 \$16	\$0 \$451 \$451 \$43 \$114 \$0 \$57	80	\$1,000
Non-Labor Office/Fum Supplies Non-Labor Office/Fum Supplies Non-Labor Other Materials Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Straight Time Labor TOTAL TOTAL		TL-PRINTED MATERLS TL-SOFTWARE TL-SOFTWARE TL-GASAEDIESEL FUEL TL-GASAEDIESEL FUEL TL-AMSCELANEOUS TL-CUSTOMER EVENT TL-COMPUTR HARDWAR TL-COMPUTR HARDWAR TL-COMPUTR HARDWAR TL-CONSULTING 7-CONSULTING 7-LADVEISERACH RKET RESEARCH 7-CATERING 7-CATERING 7-SOFTWR MAINTELSE 7-CMPTR ORD FLEMT 7-PUBLICTNS&SUBSCR 7-PUBLICTNS&SUBSCR 7-PUBLICTNS&SUBSCR 7-COPY-SERVICE CTR 7-ENGINEERING	\$0 \$77 \$0 \$0 \$0 \$40 \$244 \$4.580 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$29 \$29 \$28 \$28 \$148 \$116 \$116 \$32,589 \$32,589 \$32,589	\$0 \$451 \$43 \$114 \$0 \$0 \$0 \$87	80	80
Non-Labor Office-Furn Supplies Non-Labor Other Materials Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses		TL-OFFICE SUPPLIES TL-SOSFIWARE TL-GAS&DIESEL FUEL TL-MISCELLANBOUS TL-SUBSCR&PUBLICN TL-COMPUTR HARDWAR TL-CUSTOMER EVENT T-CONSULTING T-ADVRITENGE T-SOFTWR MAINT&LSE T-CMPTR ORD FLEMT T-PUBLICTING&SUBSCR T-PUBLICTING&SUBSCR T-PUBLICTING&SUBSCR T-COPY-SERVICE CTR	\$777 \$80 \$80 \$80 \$80 \$244 \$4.580 \$0 \$0 \$372 \$372 \$372 \$372 \$372 \$372 \$373 \$372 \$373 \$373	\$299 \$0 \$28 \$28 \$148 \$116 \$116 \$32,589 \$32,589 \$(\$19,313)	\$43 \$43 \$114 \$0 \$0 \$0 \$57	80	\$14
Non-Labor Other Materials Non-Labor Other Market Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL TOTAL		TL-SOFTWARE TL-GAS&DIESEL FUEL TL-MISCELLANEOUS TL-SUBSCR&PUBLICN TL-COMPUTR HARDWAR TL-CUSTOMER EVENT RCHASED SERVICESCONSULTING	\$0 \$40 \$40 \$24 \$244 \$4,580 \$0 \$0 \$372 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$178 \$178 \$178 \$178 \$178 \$178 \$178	\$0 \$28 \$0 \$148 \$116 \$116 \$32,589 \$32,589	\$43 \$114 \$0 \$0 \$57	\$253	80
Non-Labor Other Materials Non-Labor Other Market Research Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Misc NL Costs TOTAL TOTAL		TL-GAS&DIESEL FUEL TL-MISCELLANEOUS TL-SUBSCR&PUBLICN TL-COMPUTR HARDWAR TL-CUSTOMER EVENT RCHASED SERVICES A-CONSULTING A-ADVRTSNG&MKTG RKET RESEARCHCONSULTINGCONSULTINGCONSULTINGCONSULTINGCONSULTINGCONSULTING	\$60 \$40 \$80 \$80 \$80 \$80 \$80 \$80 \$178 \$178 \$178 \$178 \$178 \$178 \$178 \$178	\$28 \$0 \$148 \$116 \$116 \$32,589 (\$19,313)	\$114 \$0 \$0 \$57	\$591	0\$
Non-Labor Other Materials Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses		TL-MISCELLANEOUS TL-SUBSCR&PUBLICN TL-CUMPUTR HARDWAR TL-CUSTOMER EVENT RCHASED SERVICES -/-CONSULTING -/-ADVRISNG&MKTG RKET RESEARCH -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-CATERING -/-EMPTR ORD FLEMT -/-PUBLICTNS&SUBSCR -/-COPY-SERVICE CTR -/-PUBLICTNS&SUBSCR -/-COPY-SERVICE CTR -/-ENGINEERING	\$20 \$50 \$244 \$4.580 \$0 \$0 \$0 \$178 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$178 \$178 \$178 \$178 \$178 \$178 \$178	\$148 \$118 \$116 \$0 \$32,589 (\$19,313)	\$0 \$0 \$0 \$57	\$135	8787
Non-Labor Other Materials Non-Labor Other Materials Non-Labor Other Materials Non-Labor Other Materials Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Straight Time Labor TOTAL Labor Straight Time Labor		TL-MISCLELANDOS TL-MISCLELANDOS TL-COMPUTR HARDWAR TL-CUSTOMER EVENT TL-CUSTOMER EVENT TL-CUSTOMER EVENT A-CONSULTING A-CONSULTING A-CATERING A-CATERING A-CATERING A-SOFTWR MAINT&LSE A-CMPTR ORD FLEMT A-PUBLICTING&SUBSCR A-COPY-SERVICE CTR	\$244 \$4,580 \$0 \$0 \$0 \$372 \$0 \$178 \$0 \$0 \$0 \$0 \$178 \$0 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$178 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$148 \$116 \$116 \$0 \$32,589 (\$19,313)	\$0 \$0 \$57	6200	+ 0+
Non-Labor Outputer Related Non-Labor Outher Materials Non-Labor Outher Materials Non-Labor Computing Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Supplemental Workforce Non-Labor Supplemental Workforce Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL TOTAL Straight Time Labor Totalon Straight Time Labor		TL-COMPUTE HARDAR TL-CUSTOMER EVENT RCHASED SERVICES	\$2.47 \$4.580 \$6 \$0 \$0 \$372 \$0 \$178 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$116 \$116 \$0 \$32,589 (\$19,313)	\$57	450	000
Non-Labor Other Mearials Non-Labor Consulting Non-Labor Consulting Non-Labor Communication Adv Svcs Non-Labor Communication Related Non-Labor Communication Related Non-Labor Communication Adv Svcs Non-Labor Consulting Non-Labor Communication Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL TOTAL Straight Time Labor		TL-CUSTOMER EVENT RCHASED SERVICES -/-CONSULTING -/-ADVRTSNG&MKTG RKET RESEARCH -/-CATERING -/-SOFTWR MAINT&LSE -/-CMPTR ORD FLF.MT -/-PRINT/GRAPHICS -/-COPY-SERVICE CTR -/-COPY-SERVICE CTR -/-ENGINEERING	\$4,580 \$0 \$0 \$0 \$0 \$0 \$0 \$172 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$32,589 (\$19,313)	(0)	000	00
Non-Labor Outer viacerians Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Aisc Nu Costs Non-Labor Telephone Expenses		TL-COS TOMBER EVENT CHASED SERVICES C-CONSULTINGADVRTSNG&MKTG RKET RESEARCHCATERINGSOFTWR MAINT&LSECATERINGSOFTWR MAINT&LSECATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERINGCATERING	\$100	\$32,589 (\$19,313)	CCC 30	00	000
Non-Labon Purchased Services Non-Labor Consulting Non-Labor Communication/Adv Sves Non-Labor Employee Luncheons Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Sves Non-Labor Consulting Non-Labor Consulting Non-Labor Events Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses	++++++	KHANED SERVICES /-CONSULTING /-ADVRTSNG&MKTG RKET RESEARCH /-CATERING SOFTWR MAINT&LSE /-CMPTR ORD FLEMT /-PUBLICTNS&SUBSCR /-COPY-SERVICE CTR /-COPY-SERVICE CTR	\$0 \$0 \$372 \$372 \$0 \$178 \$0 \$0 \$0 \$31,661	(\$19,313)	27,75	90	90
Non-Labor Computing Non-Labor Communication/Adv Svcs Non-Labor Employee Luncheons Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Purchased Services Non-Labor Purchased Services Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Misc NL Costs Labor Straight Time Labor	++++++	7-CONSULING 7-ADNISULING 7-ADNISULING 7-CATERING 7-CATERING 7-SOFTWR MAINT&LSE 7-CMPTR ORD FLEMT 7-PUBLICTNS&SUBSCR 7-COPT-SERVICE CTR 7-ENGINEERING	\$0 \$372 \$0 \$178 \$0 \$0 \$0 \$0 \$0 \$31,661	(\$19.313)	\$126,722	80	\$0
Non-Labor Communication Adv Svcs Non-Labor Market Research Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication Adv Svcs Non-Labor Supplemental Workforce Non-Labor Burchased Services Non-Labor Consulting Non-Labor Communication Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Misc NL Costs Labor Straight Time Labor TOTAL Straight Time Labor		7-ADVRTSNO&MKTG RKET RESEARCH 7-CATERING 7-SOTTERING 7-SOTTERING 7-PRINTGRAPHICS 7-PRINTGRAPHICS 7-PUBLICTINS&SUBSCR 7-COPY-SERVICE CTR 7-ENGINEERING	\$372 \$0 \$178 \$0 \$0 \$0 \$0 \$31,661	(2126 CT 4)	80	\$642	80
Non-Labor Market Research Non-Labor Employee Luncheons Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Supplemental Workforce Non-Labor Consulting Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses		RKET RESEARCH -/-CATERING -/-SOFTWR MAINTÆLSE -/-CMPTR ORD FLEMT -/-PRINT/GRAPHICS -/-PUBLICTINÆ&UBSCR -/-COPY-SERVICE CTR -/-ENGINEERING	\$0 \$178 \$0 \$0 \$0 \$0 \$1,661	80	80	80	80
Non-Labor Computer Related Non-Labor Computer Related Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Consulting Non-Labor Consulting Non-Labor Events Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Misc NL Costs TOTAL TOTAL			\$178 \$0 \$0 \$0 \$1 \$31,661	\$22,226	80	80	80
Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Supplemental Workforce Non-Labor Comsulting Non-Labor Events Non-Labor Events Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor			\$0 \$0 \$0 \$31,661	\$1,024	\$2,171	\$890	\$415
Non-Labor Computer Related Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Supplemental Workforce Non-Labor Purchased Services Non-Labor Consulting Non-Labor Employee Training Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor		/-CMPTR ORD FLFLMT /-PRINT/GRAPHICS /-PUBLICTINS&SUBSCR /-COPY-SERVICE CTR /-ENGINEERING	\$0 \$0 \$31,661	\$0	\$5,944	80	80
Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Supplemental Workforce Non-Labor Burchased Services Non-Labor Consulting Non-Labor Communication/Adv Svcs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses		/-PRINT/GRAPHICS /-PUBLICTNS&SUBSCR /-COPY-SERVICE CTR /-ENGINEERING	\$31,661	\$185	80	80	\$803
Non-Labor CommunicationAdv Sves Non-Labor CommunicationAdv Sves Non-Labor Supplemental Workforce Non-Labor Consulting Non-Labor Consulting Non-Labor Events Non-Labor Communication/Adv Sves Non-Labor Communication/Adv Sves Non-Labor Communication/Adv Sves Non-Labor Customer Refunds Non-Labor Telephone Expenses		/-PUBLICTNS&SUBSCR /-COPY-SERVICE CTR /-ENGINEERING	\$31,661	\$0	\$1,913	80	80
Non-Labor CommunicationAdv Svcs Non-Labor Supplemental Workforce Non-Labor Purchased Services Non-Labor Employee Training Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs Non-Labor Torial Torial Labor Straight Time Labor		/-COPY-SERVICE CTR /-ENGINEERING		80	80	80	80
Non-Labor Supplemental Workforce Non-Labor Purchased Services Non-Labor Consulting Non-Labor Events Non-Labor Communication/Adv Sves Non-Labor Communication/Adv Sves Non-Labor Customer Refunds Non-Labor Telephone Expenses		/-ENGINEERING	80	\$0	\$26	80	80
Non-Labor Purchased Services Non-Labor Consulting Non-Labor Events Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Aisconfiguration Aisconfi			\$0	\$103,013	\$58,557	\$0	80
Non-Labor Consulting Non-Labor Employee Training Non-Labor Communication/Adv Svcs Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor		SRV-DESIGN	0\$	\$28,433	80	0\$	80
Non-Labor Employee Training Non-Labor Events Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor		SRV-CONSULTING-OTHER	\$10,988	\$232,441	\$60,861	\$92,991	\$78,150
Non-Labor Communication/Adv Svcs Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Aisc NL Costs Non-Labor Aisc NL Costs TOTAL Labor Straight Time Labor		SRV-TRNG & SEM IN-H	\$1,114	\$6,387	\$1,515	\$3,542	\$3,020
Non-Labor Communication/Adv Svcs Non-Labor Dues Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Aisc NL Costs Non-Labor Labor TOTAL Labor Straight Time Labor		SRV-CUSTOMER EVENT	0\$	0\$	\$1,519	0\$	80
Non-Labor Dues Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor TorAL TOTAL Labor Straight Time Labor	_	SRV-PNTG GRPH VIDEO	80	\$0	\$16	\$26	\$148
Non-Labor Customer Refunds Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor		DUES-BUSINESS/PROFES	\$147	\$134	\$146	\$275	\$147
Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor TOTAL Labor Straight Time Labor	_	MISC REIMBURSEMENTS	0\$	80	80	\$1,699	80
Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor Misc NL Costs TOTAL Labor Straight Time Labor		TELE/COMMUNICATIONS	0\$	0\$	\$35	\$28	80
Non-Labor Telephone Expenses Non-Labor Misc NL Costs Non-Labor TOTAL Labor Straight Time Labor		TELE-CELLULAR PHONES	\$2,217	\$2,291	\$3,437	\$1,742	\$865
Non-Labor Non-Labor TOTAL Labor Straight Time Labor		TELE-PAGERS	\$64	\$5	80	80	80
Non-Labor TOTAL Labor Straight Time Labor		CREDIT FOR CASH COLL	80	80		(\$48)	80
TOTAL Labor Straight Time Labor		TOTAL NON-LABOR	\$58,444	\$422,169		\$112,014	\$93,652
Labor Straight Time Labor	ALI		\$282,785	\$821,456		\$333,575	\$226,361
		SAL-MGMT S/T	\$323,453	\$327,912		\$395,156	\$451,570
t Time Labor	6110110 SA	SAL-UNION S/T	80	\$0	\$16	80	\$184
Labor Other Labor		SAL-MISC	80	80	\$886	\$0	80
Labor		SAL-SIGNING BONUS	\$2,198	80	80	80	\$2,500
ENVIRONMENTAL AFFAIRS Labor V&S		Add V&S to Adj-Rec Labor	\$54,799	\$55,177	\$62,984	\$63,264	\$75,497
ts Labor		TOTAL LABOR	\$380,450	\$383,088	\$443,005	\$458,420	\$529,752
ENVIRONMENTAL AFFAIRS Non-Labor Employee Recognition 6120145		EMP BEN-GIFT CARDS	80	80	80	\$102	80
Non-Labor Employ		EMP TRVL-AIR	\$4,456	\$5,800	\$5,625	\$5,283	\$4,189
Non-Labor		EMP TRVL-RAIL	\$46	\$108	\$144	\$136	\$222
ENVIRONMENTAL AFFAIRS Non-Labor Employee Meals 6130010		EMP TRVL-MEALS&TIP	80	80	80	\$285	80
Non-Labor Employ		EMP TRVL-INCIDENTALS	\$37	\$172	\$311	\$547	\$331
L		EMP TRVL-MILEAGE	\$11,579	\$10,673	\$6,312	\$4,775	\$5,626
Non-I abor Employee Reimburgeable		EMP TRVI -PARKING	\$250	\$263	\$1 185	\$1 207	4502

2013	\$1.738	\$168	\$266	\$9,164	\$59	80	\$1,256	\$160	\$41	\$1,156	88	\$270	\$788	\$534	80	80	\$494	80	\$44	\$70	\$665	\$000	\$5,283	\$324	± 05	\$400	\$0\$	80	\$5,213	80	80	\$1,470	\$40,530	\$3/0,282	\$57.981	\$406,843	\$58	\$150	80	\$190	\$24,186	\$9 534	\$177	\$170	\$237	\$304	\$8,282	\$594	80	\$70	\$97
2012	506	80	\$621	\$14,580	\$77	80	\$876	80	\$0	\$1,496	80	\$84	\$848	\$229	80	80	\$1,331	\$0	\$60	\$114	\$0	900	\$8,200	\$31	0\$	\$353	80	80	\$6,055	(\$3)	80				\$60.061			0\$	\$470		08	\$757	0\$	\$1.227	80	0\$	80	\$72	\$313	90	0\$
2011	\$3,665	80	\$399	\$11,985	\$57	\$15	\$1,162	80	\$0.50	\$1,975	80	\$0	\$1,656	\$520	\$0	80	\$2,030	\$0	\$15	\$33	818	\$0.00	\$6,210	\$30	\$165	\$637	\$0	80	\$5,842	\$0	\$24,485	\$1,024	\$76,009	\$519,013	\$33,377	\$234.326	0\$	0\$	\$0	\$0	0\$	\$512	\$836	\$109	80	0\$	\$704	\$27	08	56.47	25°
2010	\$2,746	80	\$352	\$12,227	\$0	\$0	\$279	\$0	\$0	\$0	80	80	\$0	\$137	\$0	(\$3,219)	\$0	\$0	80	80	\$0	0\$0 64	\$2,839	41,777	9	\$655	\$0	80	\$2,973	\$0	(\$11,486)	\$0	\$26,115	\$409,204	\$7.177	\$47.900	80	0\$	80	80	\$593	0\$	\$32	\$0	0\$	\$43	80	\$0	80	\$40.5	\$402
9006	\$2,126	\$153	\$26	\$10,844	\$0	80	\$451	80	\$0	\$17	80	\$0	\$0	\$514	\$0	\$2,306	\$49	\$38	\$0	80	\$13	\$4,110	\$3,228	\$1,461	09	\$423	\$165	\$242	\$2,795	\$0	80	\$135	\$45,793	\$420,243	000	0\$	0\$	80	\$0	80	08	00	0\$	80	0\$	80	80	80	08	000	80
Fiscal year	EMP TRVL-MEALS/ENT	EMP TRVL-CAR RENTAL	EMP TRVL-TAXI/SHUTTL	EMP TRVL-HOTEL/LODG	EMP TRVL-OTHER	MATL-PRINTED MATERLS	MATL-OFFICE SUPPLIES	MATL-COMPUTER EQUIP	MATL-SOFTWARE	MATL-GAS&DIESEL FUEL	MATL-VEHICLE PARTS	MATL-MISCELLANEOUS	MATL-SUBSCR&PUBLICN	MATL-COMPUTR HARDWAR	MATL-FITTINGS	SRV-CONSULTING	SRV-CATERING	SRV-BUSINESS CARDS	SRV-COPY-SERVICE CTR	SRV-ONLINE SRV MISC	SRV-MISCELLANEOUS	SKV-CONSULTING-OTHER	SKV-1 KNG & SEM IN-H	SR V-PNTG GRPH VIDEO	SRV-HOI IDAY EVENTS	DUES-BUSINESS/PROFES	DUES-SOCIAL	TELE-COMM SYS COSTS	TELE-CELLULAR PHONES	Cash Discounts on Pu	CREDIT FOR CASH COLL	A&G-RENTS GEN-GAS	TOTAL NON-LABOR	CAL MCMT CIT	Add V&S to Adi-Rec Lahor	TOTAL LABOR	EMP BEN-PREP F/MGMT	EMP BEN-GFT CARD/CRT	EMP BEN-GIFT CARDS	EMP BEN-GIFT CRD INV	EMP TRVL-AIK	EMP TRVI -MII FAGE	EMP TRVI -PARKING	EMP TRVL-MEALS/ENT	EMP TR VL-CAR RENTAL	EMP TRVL-TAXI/SHUTTL	EMP TRVL-HOTEL/LODG	MATL-OFFICE SUPPLIES	MATIL-OFC FURNITURE	MATI SOFTWADE	MATL-GAS&DIESEL FUEL
	6130015	6130016	6130017	6130020	6130050	6211470	6213005	6213025	6213030	6213035	6213060	6213085	6213095	6213180	6213260	6220002	6220060	6220401	6220422	6220580	6220590	6220600	6220640	6230390	6230540	6250001	6250002	6320001	6320002	6340000	6350710	6400361	Non-Labor	101AL ALI	0110020 V&S	Labor	6120093	6120113	6120145	6120151	6130001	6130012	6130014	6130015	6130016	6130017	6130020	6213005	6213015	6213023	6213035
	Employee Meals	Employee Reimburseable	Employee Reimburseable	Employee Reimburseable	Employee Reimburseable	Communication/Adv Svcs	Office/Furn Supplies	Computer Related	Computer Related	Other Materials	Other Materials	Other Materials	Other Materials	Computer Related	Other Materials	Consulting	Employee Luncheons	Communication/Adv Svcs	Communication/Adv Svcs	Purchased Services	Purchased Services	Consulting	Employee Iraining	Communication/Adv Svcs	Fvents	Dues	Dues	Telephone Expenses	Telephone Expenses	Misc NL Costs	Misc NL Costs	Misc NL Costs		Studient Time I chou	Straight Time Labor Paid Time Off Labor		Employee Related	Employee Recognition	Employee Recognition	Employee Recognition	Employee Keimburseable	Employee Meimhurseahle	Employee Reimburseable	Employee Meals	Employee Reimburseable	Employee Reimburseable	Employee Reimburseable	Office/Furn Supplies	Office/Furn Supplies	Commuter Related	Other Materials
	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Lober	Labor	Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non-Labor	Non Labor	Non-Labor
	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS FNVIRONMENTAL AFFAIRS	ENVIRONMENTAL AFFAIRS	BOLICY AND ENVIRONMENTAL SOLITION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION POLICY AND ENVIRONMENTAL SOLUTION	POLICY AND ENVIRONMENTAL SOLUTION																	
	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2200-2288	2000 0000	2200-2390	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2390	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396	2200-2396

ORA DATA REQUEST ORA-SCG-DR-043-TLG

SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

11. For SCG's Customer Service Technologies, Policies and Solutions, provide, in a spreadsheet similar to the one shown in workpapers on page 65, a detailed and itemized listing of all costs incurred for one-time, unusual, or non-recurring costs for the years 2009 through 2013, including but not limited to studies, equipment demonstrations and testing, special projects and programs, surveys, training, contract expenses, product/project development, testing and/or implementation, etc.

SoCalGas Response

The groups within CSTP&S undertake a series of projects to support the function of the group. Examples are studies or analyses contracted to outside parties in the various functional areas and RD&D projects. These activities are part of the normal course of business and projects are not duplicated from one period to the next. See the attachment included in response to Question 10 above ("ORA-SCG-DR-043-TLG-Q10 Attachment.xlsx") for a detailed listing of the types of costs included in the 2009 through 2013 adjusted recorded expenses.

Please see the following table for cost exclusions that were made to CSTP&S historical expenses.

Customer Service Technologies, Policies and Solutions Historical Cost Exclusions					Nominal (\$000)				
Workpaper	Workpaper Description	Cost Type	Workpaper Page	Cost Adjustment	2009	2010	2011	2012	2013
2200-0234	NGV Program	Labor	38-39	Pursuant to CPUC decision 12-12-037 Compression Service Tariffactivities are excluded from base rates.		(\$0.247)	(\$3)	(\$0.049)	
2200-0234	NGV Program	Non-Labor	39	To exclude costs associated with the NGV employee incentive program.				(\$63)	(\$12)
2200-2229	Business Strategy & Development	Non-Labor	58-59	Pursuant to CPUC decision 12-12-037 Compression Service Tariffactivities are excluded from base rates.				(\$0.374)	(\$37)
2200-2286	Bio-Fuels & Low-Carbon Resources Market Development	Labor	48	Costs related to a one-time project regulatory filing excluded from historical cost base for this function.		(\$18)	(\$10)		
2200-2286	Bio-Fuels & Low-Carbon Resources Market Development	Non-Labor	48-49	Costs related to a one-time project regulatory filing excluded from historical cost base for this function.			(\$469)	(\$9)	

Appendix A-Attachment A.2 ORA-SCG-DR-043-TLG, Question 12

ORA DATA REQUEST ORA-SCG-DR-043-TLG

SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

- 12. SCG's Policy and Environmental Solutions Work Group forecasts \$4.005 million (\$12.015 million over three years) in TY 2016. This is an increase of \$1.661 million or 70.86% over 2013 recorded adjusted expenses of \$2.344 million. SCG formed this group in 2013. The five year average (2009-2013) is \$1.643 million and the three year average (2011-2013) is \$2.256 million.
 - a. Provide all documentation that SCG's management utilized and relied upon to determine that its Policy and Environmental Solutions Work Group is required considering that its Regulatory Affairs group and its State Government Affairs group performed similar or "complementary" activities.
 - b. SCG formed its Policy and Environmental Solutions Work Group in 2013 (see JGR-20). Provide documentation that explains in detail how the activities which have now been reorganized into the Policy and Environmental Solutions Work Group were performed (i.e., performing "state and federal agency policy analysis, engagement, outreach, and customer support related to existing and proposed state and federal policies, laws and regulations concerning natural gas utilization)." In the response include the count of FTEs that performed the work, associated accounts/recorded costs, prior to the reorganization in 2013.
 - c. Prior to the creation of Policy and Environmental Solutions Work Group in 2013, provide documentation that explains which Work Group/Cost Center performed activities associated with "efforts to educate policymakers and assist in the development of reasoned legislation, environmental policy and regulation (such as criteria air pollution and greenhouse gas regulation), and energy policy and regulation (such as the CEC's IEPR)." In the response provide the recorded costs (2009-2013) for this activity.
 - d. SCG forecasts 17 FTEs for its Policy and Environmental Solutions Work Group (see Tables JGR-9 and JGR-10 on pages JGR-20 and JGR-22) for its Shared Services activities for the TY 2016 over its 2013 FTEs of 7.8. SCG states that three additional FTEs were added in 2013 when the group was reorganized. Provide documentation that explains in detail and demonstrates the number of FTEs that are currently assigned duties associated with each of the following activities in its Policy and Environmental Solutions Work Group: support environmental and energy policy and regulation; support legislative and public policy activities; provide administrative support.
 - e. SCG states on page JGR-21 that "The staffing increases reflected in the forecast are necessary to respond to a substantial increase in energy and environmental legislative, policy and regulatory activities, as well as an increase in customer need for compliance assistance." Provide documentation that identifies the accounts, recorded costs (2009-2014), and activities for the "substantial increase in energy and environmental legislative, policy and regulatory activities, as well as an increase in customer need for compliance assistance" in order to substantiate the assertions mentioned in this question.

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DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Question 12 (Continued)

- f. Provide documentation that explains in detail and demonstrates why SCG's current staffing level in its Policy and Environmental Solutions Work Group are insufficient to perform the work activities proposed for TY 2016 (include all supporting documentation in the response).
- g. On page JGR-22 in Table JGR-10 and on page JGR-27, SCG shows lump sum figures and provides a brief discussion for its non-labor forecast of \$2.066 million (\$6.198 million over three years) which is proposed to increase by \$0.658 million or 46.73% over 2013 recorded adjusted expenses of \$1.408 million. SCG's testimony and workpapers are insufficient and incomplete. Provide all supporting documentation which clearly identifies proposed activities and the basis for each number used in the calculation of the forecasted expenses (i.e., the documentation that demonstrates the individual breakdown of all costs included in each estimate along with source documentation/basis for numbers; where/how did SCG calculate the non-labor figures found on page JGR-27).
- h. Provide documentation that clearly shows a detailed breakdown of all activities and associated non-labor costs incurred for 2013 for SCG's Policy and Environmental Solutions Work Group.

SoCalGas Response:

a. [Provide all documentation that SCG's management utilized and relied upon to determine that its Policy and Environmental Solutions Work Group is required considering that its Regulatory Affairs group and its State Government Affairs group performed similar or "complementary" activities.]

SoCalGas determined that the Policy and Environmental Solutions Work Group was necessary to address state and local policy initiatives that were increasingly focused on electrification of all energy end uses to meet greenhouse gas reduction goals (AB32) and ozone standards (Federal Clean Air Act); without fully assessing the potential to meet these goals in a timelier and cost-effective manner using natural gas and related technologies.

The Policy and Environmental Solutions Work Group was established to provide an enhanced capability to analyze natural gas policy solutions and engage with regulators and policy leaders to provide solutions that would protect customers and help meet state and federal climate change and air quality goals cost effectively. The group was tasked with educating policymakers on the opportunities available with natural gas, renewable natural gas, and the full range of natural gas solutions capable of supporting state and federal goals.

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DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12a (Continued)

These resources and capabilities did not exist in the Regulatory Affairs or State Government Affairs groups and they do not overlap or duplicate the functions of those work groups although staff members may be consulted on specific matters from time to time. Previously, legislative issues were addressed by San Diego Gas & Electric (SDG&E), but there was limited expertise on unique natural gas related issues. As such, SoCalGas created a new group comprised of existing SoCalGas Environmental Affairs personnel that focused on air quality issues at local air districts, and hired additional staff with expertise on analyzing policy and engaging policymakers on state and federal environmental and energy policy issues. Therefore, P&ES is the group responsible for addressing unique, California-specific natural gas issues (a group that did not previously exist elsewhere at SoCalGas or SDG&E).

b. [SCG formed its Policy and Environmental Solutions Work Group in 2013 (see JGR-20). Provide documentation that explains in detail how the activities which have now been reorganized into the Policy and Environmental Solutions Work Group were performed (i.e., performing "state and federal agency policy analysis, engagement, outreach, and customer support related to existing and proposed state and federal policies, laws and regulations concerning natural gas utilization)." In the response include the count of FTEs that performed the work, associated accounts/recorded costs, prior to the reorganization in 2013.]

Prior to formation of the P&ES group in 2013, the work on state and federal agency policy analysis, engagement, outreach, and customer support related to existing and proposed state and federal policies, laws, and regulations concerning natural gas utilization was performed by the Environmental Affairs Group, a part-time legislative analyst, and various staff members in regulatory affairs and other departments that devoted part of their time to addressing policy matters as they were identified. With the growing array of policy matters related to natural gas, this approach was deemed to be inadequate to provide the level of analysis and engagement needed.

The primary drivers for the increase in policy matters related to natural gas are the advent and implementation of AB32 and new and evolving Federal Clean Air Act standards and requirements. Due to these drivers, SoCalGas determined there was a need for a group to represent the interests of natural gas customers as the state developed plans to meet air quality requirements and long term greenhouse gas reduction goals.

The costs of FTEs working on local air quality issues are included in the testimony (see page JGR-20, Table JGR-9) and copied below. Also below is a table showing functions described above, previous location, and FTE count. The hours and costs of various staff members previously supporting work on policy matters on an occasional or ad hoc basis was not separately tracked and is, therefore, not available.

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DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12b (Continued)

TABLE JGR-9

Policy & Environmental Solutions

In Thousands of 2013 Dollars – Incurred Costs

		Adju	sted-Reco	orded			Forecast		Change
Year	2009	2010	2011	2012	2013	2014	2015	2016	2013- 2016
Labor	381	431	678	894	937	1,517	1,861	1,940	1,003
Non- labor	46	589	1,628	1,221	1,408	1,486	1,836	2,066	658
Total	427	1,020	2,307	2,115	2,345	3,002	3,696	4,005	1,661
FTEs	3.3	3.8	5.7	7.6	7.8	13.2	16.5	17.3	9.5

Note: Totals may include rounding differences

Function	Pre-2013 Location	FTE
Director, Environmental Affairs	Environmental Affairs, SoCalGas	1
Local Air District Policy and Support and		
Customer Support	Environmental Affairs, SoCalGas	6.6
Legislative Support	Legislative Affairs, SDG&E	0.5
	Total	8.1

c. [Prior to the creation of Policy and Environmental Solutions Work Group in 2013, provide documentation that explains which Work Group/Cost Center performed activities associated with "efforts to educate policymakers and assist in the development of reasoned legislation, environmental policy and regulation (such as criteria air pollution and greenhouse gas regulation), and energy policy and regulation (such as the CEC's IEPR)." In the response provide the recorded costs (2009-2013) for this activity.]

Please see response to Question 12b above.

d. [SCG forecasts 17 FTEs for its Policy and Environmental Solutions Work Group (see Tables JGR-9 and JGR-10 on pages JGR-20 and JGR-22) for its Shared Services activities for the TY 2016 over its 2013 FTEs of 7.8. SCG states that three additional FTEs were added in 2013 when the group was reorganized. Provide documentation that explains in detail and demonstrates the number of FTEs that are currently assigned duties associated with each of the following activities in its Policy and Environmental

ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004

SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12d (Continued)

Solutions Work Group: support environmental and energy policy and regulation; support legislative and public policy activities; provide administrative support.]

The number of FTEs that are currently (2014) assigned duties associated with the activities requested are:

- Support environmental and energy policy and regulation: 5 FTEs
- Support legislative and public policy activities: 2 FTEs
- Administrative support: 0 FTE
- e. [SCG states on page JGR-21 that "The staffing increases reflected in the forecast are necessary to respond to a substantial increase in energy and environmental legislative, policy and regulatory activities, as well as an increase in customer need for compliance assistance." Provide documentation that identifies the accounts, recorded costs (2009-2014), and activities for the "substantial increase in energy and environmental legislative, policy and regulatory activities, as well as an increase in customer need for compliance assistance" in order to substantiate the assertions mentioned in this question.]

A significant increase in the number and scope of federal, state and local environmental and energy policy initiatives are the primary drivers behind the staffing increase request. For example, at the federal level, the Environmental Protection Agency (EPA) has proposed to revise the national ambient air quality standards for ozone, to regulate greenhouse gas emissions (GHG) from new and existing power plants, and to regulate methane emissions from the natural gas supply chain. The state of California has established ambitious goals to reduce greenhouse gas emissions to 1990 levels by 2020 and to 80% below 1990 levels by 2050. In order to accomplish these goals the Air Resources Board (ARB), the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) are in the process of developing plans and regulations, all of which will impact natural gas customers. At the local level, the two extreme ozone non-attainment air districts in SoCalGas' service territory are in the process of developing Air Quality Management Plans (AQMP). Meeting the current ozone standards will require approximately an 80% reduction beyond current levels in emissions of oxides of nitrogen (NOx), which is a precursor to ozone. Since the transportation sector is responsible for 80-90% of the NOx emissions in California and the local air districts regulate only stationary sources, the 2016 AQMPs will have a greater impact on SoCalGas' customers than previous AQMPs. As such, SoCalGas needs additional resources to engage in an active, informed manner in the development of the plans (2015) and assist customers with implementation (2016).

ORA DATA REQUEST ORA-SCG-DR-043-TLG

SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12e (Continued)

In summary, SoCalGas requires additional staff to engage in the federal, state and local environmental and energy policy initiatives discussed above on behalf of natural gas customers. A list of plans and proceedings resulting from the broader initiatives with links to the relevant documents is provided below. While some of these initiatives have been in place for several years, most have been updated since 2012 as it has become apparent that state and federal environmental policy goals cannot be achieved without redoubled efforts.

Federal:

- Proposed Revisions to national Ambient Air Quality Standards for Ozone, issued: 2014 http://www.epa.gov/airquality/ozonepollution/pdfs/2014decwebinar.pdf
- Climate Action Plan, issued: 2013 http://www.whitehouse.gov/share/climate-action-plan
- Regulating carbon from existing power plants under section 111(d) of the clean air act, issued: 2014
 - https://www.federalregister.gov/articles/2014/11/13/2014-26900/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating
- Federal Methane Regulations, issued 2014 http://www.epa.gov/airquality/oilandgas/whitepapers.html

State:

- California's 2030 Climate Commitment, Fourth Assessment currently underway http://www.arb.ca.gov/html/2030climatecommitment.htm
- Vision for Clean Air: A Framework for Air Quality and Climate Planning, issued 2012
 - http://www.arb.ca.gov/planning/vision/vision.htm
- First Update to the AB32 Scoping Plan, issued: 2013 http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm
- SB 605 (Lara, Chapter 523, Statutes of 2014), implementation: Ongoing http://leginfo.ca.gov/pub/13-14/bill/sen/sb_0601-0650/sb_605_bill_20140921_chaptered.htm
- Low-Carbon Fuel Standard Reauthorization, implementation: 2012 2015 http://www.arb.ca.gov/fuels/lcfs/2a2b/2a-2b-apps.htm
- Sustainable Freight Transport Initiative, issued 2013, and related programs: http://www.arb.ca.gov/gmp/sfti/sfti.htm
- Renewable Natural Gas Standard: expected legislation in 2015 based on http://www.bioenergyca.org/wp-content/uploads/2014/11/BAC-Report-on-Renewable-Gas-Standard.pdf
- Natural Gas Act (AB1257) Report, work in process: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB125
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ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004

SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12e (Continued)

Integrated Energy Policy Report 2013 (IEPR): The CEC's 2013 IEPR established a
definition for ZNE buildings in anticipation of ZNE requirements for new
construction starting in 2020. The treatment of natural gas technologies in these
regulations will have significant impact on natural gas ratepayers.
http://www.energy.ca.gov/2011_energypolicy/documents/2011-07-20_workshop/presentations/Revised_Zero_Net_Energy_Definition.pdf

Local:

Air Quality Management Plan (AQMP) Development and Implementation: http://www.aqmd.gov/home/about/groups-committees/aqmp-advisory-group

Local air districts must develop periodic AQMP identifying rules and strategies to meet the NAAQS established by the Federal Environmental Protection Agency (EPA). Two of the local air districts, SCAQMD and SJVAPCD, are currently not in attainment for PM and ozone. By 2016, both districts must submit plans to meet current ozone standards. The districts have already begun the public process to evaluate potential rules and strategies to meet the standard. P&ES staff is needed to work with the district to develop cost effective means to meet NAAQS. Activity levels will continue to increase as the districts get closer to their 2016 deadlines and through the implementation period. Finally, as discussed in testimony, new and more complex air quality regulations continue to be developed and introduced. SoCalGas staff works with local air regulatory entities to contribute expertise, address operational impacts on SoCalGas, and find the most cost effective way to achieve air quality requirements. Additionally, SoCalGas provides education and support to large non-residential customers who must comply with increasingly complex air quality rules and regulations (p. 26)

f. [Provide documentation that explains in detail and demonstrates why SCG's current staffing level in its Policy and Environmental Solutions Work Group are insufficient to perform the work activities proposed for TY 2016 (include all supporting documentation in the response).]

Please see response to Question 12e above.

Staffing levels in 2013 were not sufficient to support the activity levels for P&ES. Staffing levels in 2014 have increased due to the increased workload driven by policy initiatives described above. 5.4 additional staff were added in 2014 to accommodate the increased workload. These staff were: Environmental Policy Manager, Senior Environmental Policy Advisor, Energy Policy Manager, Energy Policy Advisor, Environmental Program Manager, and a staff member who was previously shared 60%/40% with another department was made 100% P&ES.

ORA DATA REQUEST ORA-SCG-DR-043-TLG

SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12 (Continued)

g. [On page JGR-22 in Table JGR-10 and on page JGR-27, SCG shows lump sum figures and provides a brief discussion for its non-labor forecast of \$2.066 million (\$6.198 million over three years) which is proposed to increase by \$0.658 million or 46.73% over 2013 recorded adjusted expenses of \$1.408 million. SCG's testimony and workpapers are insufficient and incomplete. Provide all supporting documentation which clearly identifies proposed activities and the basis for each number used in the calculation of the forecasted expenses (i.e., the documentation that demonstrates the individual breakdown of all costs included in each estimate along with source documentation/basis for numbers; where/how did SCG calculate the non-labor figures found on page JGR-27)].

The following table provides a breakdown and the basis for the TY 2016 P&ES non-labor forecast.

P&E	S Non-labor F	Forecast
Activities	2016	Explanation
		Additional travel with expanded
		responsibilities in Sacramento (ARB, CEC,
Employee Costs	135,000	Leg) plus travel & expense for new FTE
		On-going sponsorship of energy &
Conference & Event Sponsorship	230,000	environmental conferences and events
		On-going educational webinars &
		communications plus Environmental Dialogue
Communication & Educational Outreach	200,000	and Opinion Leader research
Membership	85,000	RegFlex, CCEEB, other
		Additional customer support for 2016 AQMP
Engineering Support	168,000	Rule development
		Update of transportation pathways work &
		SJV emissions study, update of 2050
Update of Existing Studies	323,000	study/evaluation of 2030 GHG target
		Technology Development Pathway to 2050,
		evaluation of new EPA standard, studies on
		methane emissions, indoor air quality, natural
		gas in the ZNE home (several are likely to be
New Studies	925,000	mult-year studies)
Total	2,066,000	

ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE

DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 12 (Continued)

h. [Provide documentation that clearly shows a detailed breakdown of all activities and associated non-labor costs incurred for 2013 for SCG's Policy and Environmental Solutions Work Group].

Please see the attachment included in response to Question 10 above ("ORA-SCG-DR-043-TLG-Q10.xlsx") for a detailed breakdown of P&ES non-labor costs incurred in 2013.

Appendix A-Attachment A.3 ORA-SCG-DR-043-TLG, Question 13

ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE DATE RECEIVED: JANUARY 21, 2015 DATE RESPONDED: FEBRUARY 5, 2015

- 13. SCG's Natural Gas Vehicle Program forecasts \$2.271 million (\$6.813 million over three years) in TY 2016. This is an increase of \$0.839 million or 58.59% over 2013 recorded adjusted expenses of \$1.432 million. The five year average (2009-2013) is \$1.541 million. SCG's expenses were relatively stable between 2009 and 2011, and then increased by \$0.429 million in 2012. SCG's expenses decreased by \$0.464 million between 2012 and 2013 back down to the recorded expense levels of 2009-2011
 - a. Provide documentation that explains in detail and demonstrates the amount of funding SCG requested and was authorized in its 2012 GRC (D.13-05-010) for its Natural Gas Vehicle Program.
 - b. Referring to pages JGR-29 to JGR-31, SCG forecasts \$1.111 million in labor expenses in TY 2016, this is an increase of \$0.493 million or 79.77% over 2013 recorded adjusted expenses. SCG's forecast includes incremental funding for five additional FTEs. SCG's FTEs and associated labor expenses have declined between 2010 and 2013. Provide documentation that explains if during 2009-2013 SCG added "new G-NGV customers", received customer inquiries, including inquires related to new programs and regulations, performed customer services for "existing G-NGV customers", performed "outbound customer contacts and meetings to promote adoption", and performed activities associated with various customer events.
 - c. On page JGR-29 in Table JGR-11, SCG shows a lump sum figure of \$1.161 million for its non-labor forecast but does not provide any discussion for its proposed non-labor activities which is proposed to increase cost by \$0.346 million or 42.45% over 2013 recorded adjusted expenses of \$0.815 million. The five year average from 2009 through 2013 is \$0.890 million. SCG's testimony and workpapers are insufficient and incomplete. Provide all supporting documentation which clearly identifies proposed activities and the basis for each number used in the calculation of the forecast expenses (i.e., the documentation that demonstrates the individual breakdown of all costs included in each estimate along with source documentation/basis for numbers; where/how did SCG calculate the non-labor figures).

SoCalGas Response:

- a. In the 2012 GRC (D.13-05-010), the NGV Program requested incremental funding of \$860,000 and was authorized \$230,000 (2009 dollars) in incremental funding (pages 640 641).
- b. During 2009-2013, SoCalGas and SDG&E added 94 G-NGV meters, an increase of 29.6%. The G-NGV tariff requires a separate meter for each compressed natural gas vehicle refueling station, so the increase in meter account directly correlates to an increase in compressed natural gas (CNG) vehicle refueling stations for both existing and new customers in the combined service territories.

ORA DATA REQUEST ORA-SCG-DR-043-TLG SOCALGAS 2016 GRC – A.14-11-004 SOCALGAS RESPONSE DATE RECEIVED: JANUARY 21, 2015

DATE RESPONDED: FEBRUARY 5, 2015

Response to Question 13b (Continued)

Preliminary site evaluation forms are submitted by customers interested in potentially constructing CNG vehicle refueling stations. During 2009-2013, SoCalGas and SDG&E saw annual Preliminary Site Evaluation (PSE) submittals increase from 9 in 2009 to 79 in 2013. Although SoCalGas did not track all individual customer contacts and inquiries; collectively, the growth in these two metrics demonstrate the significant market growth, customer interest, and associated utility outreach activities occurring during this period.

c. As stated in Exhibit SCG-13 page JGR-32, "Incremental non-labor costs include \$346,000 account management and customer outreach program costs for off-road applications, commuter/home refueling applications, Low-Carbon Fuel Standard (LCFS) program, customer safety training courses, and employee expenses related to incremental FTEs." An explanation of the individual costs is detailed in Workpaper Exhibit SCG-13-WP (pages 35 to 36; see attached file "ORA-SCG-DR-043-TLG-Q13c Attachment.pdf"). Employee expenses are based on historical costs and LCFS program costs are based on quotations from contractors. Other non-labor costs associated with customer safety training courses and account management and customer outreach program costs for new and emerging markets (off-road applications, commuter/home refueling applications) were estimated.

Appendix B

SoCalGas-ORA-DEF-004-TLG; Question B.1

ORA DEFICIENCY DATA REQUEST SOCALGAS 2016 GRC – A.14-11-XXX SOCALGAS-ORA-DEF-004-TLG

OCALGAS-ORA-DEF-004-T PARTIAL RESPONSE

DATE RECEIVED: AUGUST 21, 2014 DATE RESPONDED: SEPTEMBER 6, 2014

B. D.89-01-040 Appendix B, page B-22 item 4 requires SoCalGas to furnish base year historical and estimated data and subsequent years with evaluation of changes up to and including the test year.

SoCalGas needs to:

1. Provide account/line item detail that shows explanations "and" a breakdown of the calculation for "all" recorded increases/decreases in the last five years for "labor and non-labor" expenses and capital expenditures. In the sections included in SCG-10, SCG-11 SCG-12, and SCG-13, SoCalGas did not provide discussions in its testimony or workpapers on the increases/decreases of the changes in expense levels during the last five years.

SoCalGas Response:

Please see separate attachments:

SCG-ORA-DEF-004-TLG-B1-O&M-SCG-10 (Sara Franke)* SCG-ORA-DEF-004-TLG-B1-O&M-SCG-11 (Evan Goldman) SCG-ORA-DEF-004-TLG-B1-O&M-SCG-12 (Gwen Marelli) SCG-ORA-DEF-004-TLG-B1-O&M-SCG-13 (Jeffrey Reed)

^{*}Response is forthcoming for SCG-ORA-DEF-004-TLG-B1-O&M-SCG-10

Exh No: SCG-13						1	П	П		
Witness Name: Jeffrey Reed										
Constant 2013\$ in Thousands										
			usted Record					iance		Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
2RD001.001 - RD&D CS Te	chnology Develo	pment (Refund	dable)							
Labor	1,182	1,400	1,357	1,447	1,134	218	(43)	90	(313)	
NLbr	8,990	11,264	11,289	6,919	6,945	2,274	25	(4,370)	26	
NSE	0	0	0	0	0	-	-	-	-	
2RD001.001 Total	10,172	12,664	12,646	8,366	8,079	2,492	(18)	(4,280)	(287)	Page 6 of 60
i	Variance	e Explanation					Varianc	e Amount		
2009-10										
Labor										
The Research Development and Dei	monstration (RD&	&D) program is	on a 4 year c	ycle (2008-2011	1) with an					
authorized level of spend. Spending	g level fluctuates	year-to-year b	ased on proje	ct timing, mix c	of internal					
versus external resources and timing	g of movement o	f staff into and	out of the de	partment.						
						218				
NLbr										
The Research Development and De	monstration prog	ram is on a 4 v	ear cycle (200	08-2011) with a	n authorized					
level of spend. Spending level fluct			, ,	•						
resources and timing of movement		-	-		caternal					
. 235 arees and chang of movement	o. starr into and t	out of the depa	· circirci			2,274				
						2,492				
2010-11						2,432				
Labor			1 (22	20.0014) ::1						
The Research Development and Dei										
level of spend. Spending level fluct				nix of internal v	ersus external					
resources and timing of movement of	of staff into and o	out of the depa	rtment.							
	1	T		1			(43)			
NLbr										
The Research Development and Dev										
level of spend. Spending level fluct				nix of internal v	ersus external					
resources and timing of movement of	of staff into and o	out of the depa	rtment.							
							25			
		T		1						
							(18)			
2011-12										
Labor										
The Research Development and Den	nonstration prog	ram is on a 4 ye	ear cycle (201	2-2015) with ar	n authorized					
level of spend. This was the begining	g of the cycle witl	h new authoriz	ed level of spe	end. Spending I	evel					
fluctuates year-to-year based on pro	ject timing, mix	of internal vers	us external re	sources and tin	ning of					
movement of staff into and out of the	ne department.							90		
NLbr										
The Research Develepment and Den	nonstration progr	ram is on a 4 v	ear cycle (201	2-2015) with an	n authorized					
level of spend. This was the beginin				•						
fluctuates year-to-year based on pro	• .									
timing of payments to outside partie				•				(4,370)		
•	•	2012 spend v	vas uncharact	eristically low t	ecause of			(4,370)		
project start delays due to a delayed	i and decision.									
								(4,280)		
2012-13								(4,200)		
Labor				12.2015)!#!						
The Research Development and Dev										
level of spend. Spending level fluctu				ix of internal ve	ersus external					
resources and timing of movement	ot staff into and o	out of the depa	rtment.							
		1		1					(313)	
NLbr										
The Research Development and Der				,						
level of spend. Spending level fluct	uates year-to-yea	ar based on pro	ject timing, v	ariation in the s	size and co-					

ORA Deficiency Data Request SoCalGas-ORA-DEF-004-TLG Question B.1

		Adj	usted Record	ed			Var	iance		Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
2RD001.001 - RD&D CS Te	chnology Develo	pment (Refund	lable)							
Labor	1,182	1,400	1,357	1,447	1,134	218	(43)	90	(313)	
NLbr	8,990	11,264	11,289	6,919	6,945	2,274	25	(4,370)	26	
NSE	0	0	0	0	0	-	-		-	
2RD001.001 Total	10,172	12,664	12,646	8,366	8,079	2,492	(18)	(4,280)	(287)	Page 6 of 60
funding of individual projects and tin	ning of payments	to outside par	ties near yea	r end. 2012 sp	end was					
uncharacteristically low because of p	project start delay	ys due to a dela	ayed GRC dec	ision.					26	
				, ,						
									(287)	

Appendix C

Technology Needs Assessment Summary
(Appendix B of Ex. SCG-013-R; Direct Testimony of Jeffrey G. Reed;
Customer Service Technologies, Policies and Solutions)

Appendix B

Technology Needs Assessment Summary

Residential End-use Applications RD&D

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Efficiency and Renewable Energy Systems Integration	Residential utility customers consume 74 MMBtu/yr of natural gas¹ and 10,837 kWhr/yr of electricity² Present Title 24 residential home efficiency standards	 2020 target for Zero Net Energy new homes and 40% energy reduction for existing homes to 37 MMBtu/yr of natural gas and 3,900 kWhr/yr of electricity.³ Energy Efficiency Program goals set by the CPUC in D.12-11-015 	 Develop and integrate new high efficiency appliances combined with distributed renewable thermal and electric energy generation like solar thermal, PV and fuel cells. Develop improved "Smart Home" technologies Cost reductions to make systems affordable for the home owner. Integration of electric and natural gas grids through residential fuel cells, and CHP 	 Single family home and multifamily home demonstrations that incorporate solar thermal, fuel cell (or other microCHP) with condensing appliances. Smart Home demonstration projects that integrate smart appliances, home energy management, onsite vehicles refueling, smart meters with twoway communication with energy utilities, and remote controls of appliances. Continued support and demonstration of residential solar thermal products and higher efficiency gas-fired condensing products.
Appliance NOx Emissions and Indoor Air Quality and	• NOx emissions limit: 40 ng/joule ⁴	Nox for water heaters; 14 ng/joule by October 2014 for residential condensing central space heating furnaces; 14 ng/joule by October 2015 for residential non-condensing furnaces ⁵ 2016 Title 24 residential home efficiency standards	 Develop space heaters < 14 ng/Joule NOx. Develop water heaters < 10 NG/joule NOx. Reduce cost of condensing tankless water heaters. Reduce cost of condensing tanktype water heaters. Reduce cost and improve efficiency of gas heat pump water heaters. 	 Support industry developing new low NOx emission products on water heaters and space heaters. Foster development of new combustion technologies using metallic, ceramic, and fiber materials Foster development of lower cost condensing water heating and space heating technologies. Life cycle and field testing of new units with manufacturers

p.1 Available at: http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtrendsresidcon/ngtrendsresidcon.pdf ¹ EIA's 2009 Residential Energy Consumption Survey, Trends in U.S. Residential Natural Gas Consumption

GR-B-1

² EIA Frequently Asked Questions. Available at http://www.eia.gov/tools/fags/fag.cfm?id=97&t=3

³ CEC- 2007 Integrated Energy Policy Report (IEPR) Zero Net Energy (ZNE) goals

⁴ SCAQMD Rule 1111 furnace NOx emissions limits. Available at http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1111/par1111_prelimdraftsr.pdf?sfvrsn=2

[.] Ibid.

Commercial End-use Applications RD&D

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Efficiency and Renewable Energy Systems Integration, Heating & Cooling	NOx emissions limit is 40 ng/joule ⁶ Title 24 commercial building efficiency standards	 2030 target for commercial buildings⁷ Energy Efficiency Program goals set by the CPUC under Decision 12-11-015 Future Title 24 Energy Code 	 Develop cost competitive (high efficiency) condensing products and gas heat pump technologies Thermodynamic cycles such as adsorption cooling and heat pumps Insulation materials and geometries Develop advanced controls to maximize the performance characteristics of the solar system, chillers, heaters, and water heaters 	 Evaluate and identify high efficiency water and space heating systems for commercial buildings including condensing water heating and condensing space heating products. Support companies with advanced gas-fired heat pump technology based on absorption chiller technology and engine driven chiller advanced catalyst emission control. Support development of cost effective adsorption cooling systems integrated with solar thermal. Support development of advanced radiant burner technology for commercial warehouse and manufacturing applications.
Commercial Cooking & Food Service Equipment	Commercial food service equipment does not have to meet NOx or efficiency standards.	NOx control projected for SCAQMD in 2016 AQMP Energy Efficiency Program goals set by the CPUC under Decision 12-11-015	Improved combustion systems and geometries Insulation and thermal control Exhaust management and exhaust treatment systems	 Support integration of advanced burner technologies that provide high efficiency and lower NOx emissions with major cooking appliances (fryers, griddles, ovens, ranges). Demonstration of a "commercial kitchen of the future" which will integrate high efficiency appliances with advanced ventilation concepts and control systems. Evaluate, identify, and encourage use of improved, higher efficiency gas-fired cooking appliances that can qualify for the California Energy Star program.

JGR-C-3

⁶ Ibid. ⁷ EPA 2030 Challenge Available at http://www.architecture2030.org/files/2030_Challenge_Targets_National.pdf.

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Ovens, Furnaces, Boilers, Process Heating	Uncontrolled NOx levels from industrial ovens, dryers, furnaces, afterburners and other process equipment Boiler NOx limits: 9 to 30 ppm ⁸	30 to 60 ppm NOx emission levels depending on process temperature for industrial ovens, dryers, furnaces, afterburners and other process equipment ⁹ Boiler NOx limits: 5 to 9 ppm Increasingly stringent NOx emissions limits are anticipated in SCAQMD's 2016 AQMP	Advanced boiler products to reduce Nox emissions. Advanced burner and heat recovery technologies to reduce increase efficiency and reduce emissions from industrial ovens, dryers, furnaces, afterburners and other process equipment	 Demonstration of a high efficiency gas-fired rotary dryer with advanced heat pump in a food processing application. Demonstrations of advanced waste heat recovery technologies in caustic effluent applications that are commonly found in various metal melting applications (e.g. testing of Gas Guard Heat Recovery technology that utilizes "trona" [soda ash] as a sorbent material that removes 96% of hydrogen chloride from the exhaust stream) Demonstration of advanced economizers for industrial boiler applications to refine system performance and installation costs. Demonstration of improved regenerative and recuperative thermal oxidation technologies to destroy smog-causing VOCs.

 $^{^8}$ SCAQMD Rule 1146. 9 SCAQMD Rules 1147 and 1153.

Clean Generation RD&D

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Waste Heat Recovery	Organic Rankin cycle systems are less than 8% efficient	20% recovery is necessary to cost-effectively help meet AB32 CO2 emissions goals	Develop improved cycles, heat exchange systems (e.g. micro- channel heat exchangers and advanced sorbents), thermally drive chillers	 Demonstrate heat recuperation and power generation systems. Demonstrate advanced adsorption chillers operating on waste heat
Internal Combustion Engines, Turbines, and Sterling Systems	NOx emission limit for stationary sources of 0.07lbs/MW-hour for 2013 AQMP for DG/CHP applications (AQMD-Rule 1110.2)	 NOx emission limit for stationary sources of 0.07lbs/MW-hour for DG/CHP. 30% efficiency gains are necessary to help meet AB32 GHG emissions goals. 	 Advanced combustion technologies, after-treatment catalytic processes and control systems. Lighter, low-friction materials 	Demonstrate advanced combustion technologies, low-NOx post-combustion treatment systems, sensors and controls systems, free piston engines and dual fuel biogas/biomethane systems.
Fuel Cells	 60 percent efficiency (CHP) Capx: \$5,000/kW+ Poor dynamic and start- stop operation 	80 percent efficiency (CHP) Capx: <\$2000/kW Excellent load following and start-stop operation	Lower-cost catalyst materials with improved reaction kinetics Increased stack life by reducing operating temperatures and improving seals and adhesives Faster response electrolytes Materials advances	 Demonstration of small 1-100 kW low temperature proton exchange membrane fuel cells capable of load following to meet Zero-Net Energy goals for 2020. Demonstrate direct methane fuel cells using low-cost catalytic non-thermal plasma technology. Demonstrate ability of fuel cell systems to run on biogas/biomethane in order to validate a nearzero GHG emissions.
Carbon Capture, Utilization & Storage	• Low system efficiency & costs 50% above market	 30% reduction from 2005 levels by 2030 California's Interim Goal of 556 avg. lb. CO2 per net MWh and final goal of 537 avg. lb. CO2 per net MWh¹⁰ 	Variety of low-cost CO2 capture technologies from ARPA-e using pre-combustion separation, scrubbers, phase change, air separators and biological systems	 Demonstrate enzymatic and high velocity expansion CO2 precipitation technologies. Demonstrate profitable algae-based CO2 recycling

10 EPA's proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.

JGR-B-4

Clean Transportation RD&D

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Engine Development, After- treatment, Vehicle Integration, and Hybrid electric vehicles	Cummins Westport, Honda and GM produce optimized natural gas engines.	 Multiple engines from several suppliers are required. NOx performance 80%+ below current levels 	New engine cycles, combustion systems, exhaust treatment and heat recovery to improve fuel efficiency and performance while decreasing emissions. NGV versions of hybrid gasoline-electric vehicles with part-time zero-emission miles and extended range	 Demonstrate advanced selective and nonselective catalytic reduction and lean NOx trap systems. Demonstrate Miller and Atkinson and Camless cycles, improved combustion, high pressure direct injection Demonstrate waste heat recovery using exhaust recirculation and thermo-chemical and thermoelectric recuperation. Demonstrate hybrid NG-electric vehicles.
Fueling Infrastructure	Natural Gas refueling cost is 50% higher compared to liquid fuel systems	Cost competitive with liquid fuel systems Reduction in "carbon intensity" of California's transportation fuels by at least 10 percent by 2020 ¹¹	Advanced compressor technologies Lighter, low-friction materials and low-cost additive manufacturing Modular package designs	 Develop standardized station designs, increased dispensing efficiencies, better controls, including for time-fill, smaller footprint, and lower cost. Support research in reducing methane emission from NGV fueling stations or in tailpipe emissions (e.g., new vehicle catalyst formation)
Fuel Storage	• CNG fuel storage is 200% less dense and heavier than liquid fuel storage.	NGV fuel storage equal to the energy density and weight of liquid fuel storage.	 Stronger and lighter materials for CNG storage Novel internal geometries Develop low pressure sorbent storage technologies 	Demonstrate next generation fuel storage systems.
Refueling	• Only one product available and cost is over \$5,000	• Safe, reliable, durable home refueling systems that cost less than \$2,000 per unit.	Micro-scale versions of advanced compressors being pursued through ARPA-e	 Advisory participation in ARPA-e program Field demonstration of prototype units

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¹¹ California Executive Order S-1-07.

Renewable Natural Gas RD&D

Project Area	Current Performance	Required Performance	Development Areas	SoCalGas RD&D Activities
Solar Thermal Hydrogen and RNG	Lab-scale systems Cost >\$30/MMBtu	100 kg/hour hydrogen 250 MMBtu/day natural gas at a cost of < \$6/MMBtu	Develop Solar SMR with high- efficiency thermal energy recuperation Develop Concentrated solar water- splitting and methanation	Demonstrate solar SMR and solar water-splitting technologies in collaboration with DoE and other partners
RNG from Biomass	No commercial projects in CA Pilot demonstration systems producing 1000 MMBtu/day Cost > \$10/MMBtu	• 1000 MMBtu/day at a cost of < \$10/MMBtu	Anaerobic digester yield improvement Cost reduction and down-sizing of gasifier systems Improve system heat recovery down-stream gas treatment Inorganic and organic methanation technologies	Component test and validation Gasification demonstration project with methanation and pipeline injection in collaboration with DoE and other partners
Renewable Energy Storage	• Power-to-gas round-trip efficiency ~35% • LCOE ~ \$0.30/kWh	• Round-trip efficiency > 40% • LCOE <\$0.20/kWh	Improve the efficiencies of electrolysis and methanation systems System design improvements through materials, manufacturing and volume	Techno-economic modelling including cobenefits with fueling applications Demonstrate a complete grid-integrated powerto-gas system co-located with sources of CO2 such as breweries, waste water treatment plants, landfills or biomass gasifier in collaboration with DoE and other partners